Food and Agriculture Organization of the United Nations

2nd issue 2017

GLOBEFISH HIGHLIGHTS

A QUARTERLY UPDATE ON WORLD SEAFOOD MARKETS

APRIL 2017 ISSUE, with Annual 2016 Statistics

ABOUT GLOBEFISH

GLOBEFISH forms part of the Products, Trade and Marketing Branch of the FAO Fisheries and Aquaculture Department and is part of the FISH INFOnetwork. It collects information from the main market areas in developed countries for the benefit of the world's producers and exporters. Part of its services is an electronic databank and the distribution of information through the European Fish Price Report, the GLOBEFISH Highlights, the GLOBEFISH Research Programme and the Commodity Updates.

The GLOBEFISH Highlights is based on information available in the databank, supplemented by market information from industry correspondents and from six regional services which form the FISH INFOnetwork: INFOFISH (Asia and the Pacific), INFOPESCA (Latin America and the Caribbean), INFOPECHE (Africa), INFOSAMAK (Arab countries), EUROFISH (Central and Eastern Europe) and INFOYU (China).

ISBN 978-92-5-109778-6

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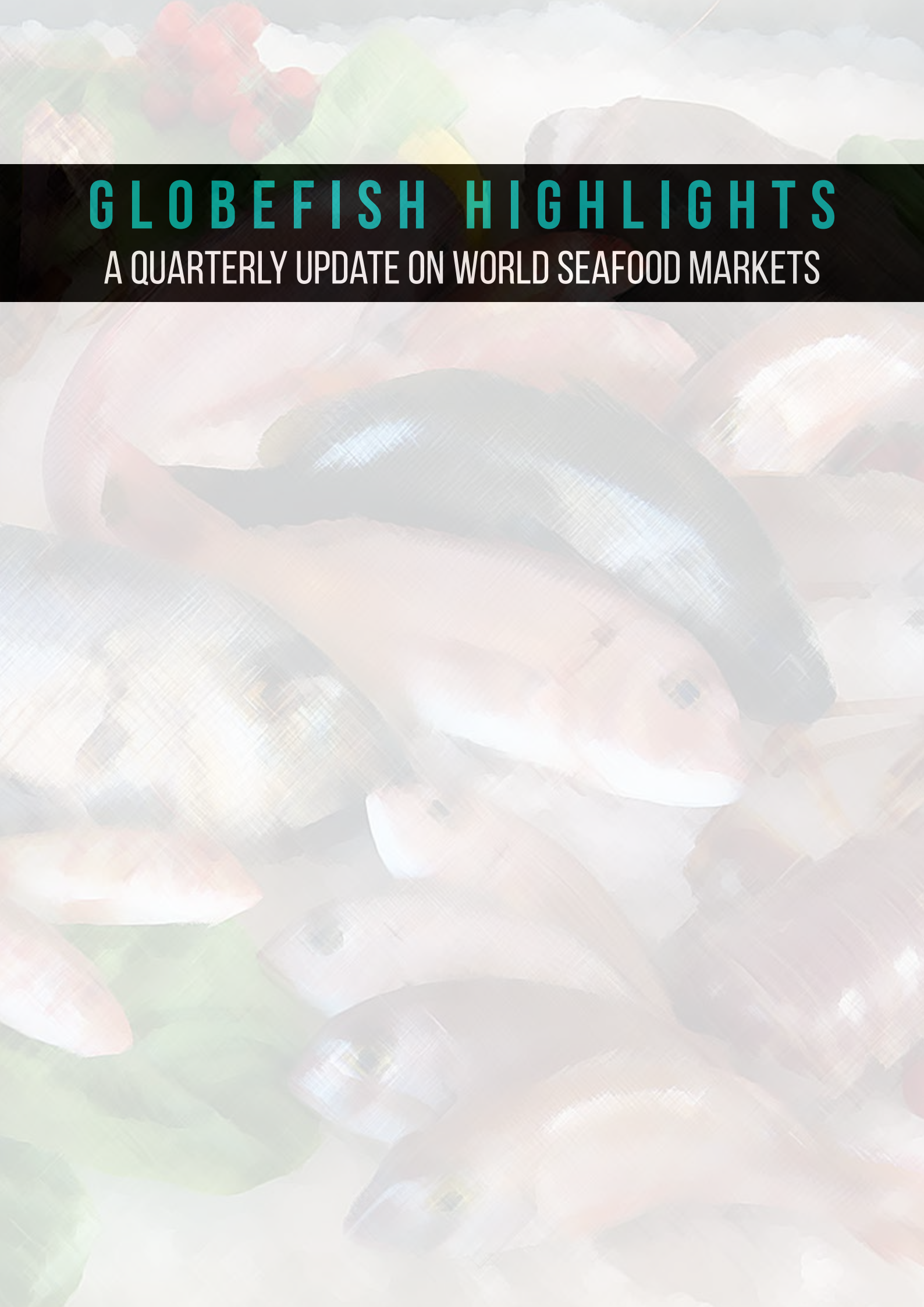

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ACKNOWLEDGEMENTS

GLOBEFISH HIGHLIGHTS

This issue of GLOBEFISH Highlights has been prepared by Anna Child, Silvio Alejandro R. Catalano Garcia, Helga Josupeit, Shen Nianjun, Turan Rahimzadeh and Weiwei Wang with contributions by Shirlene M. Anthonysamy (Pangasius & Tilapia), Felix Dent (Salmon & Seabass/bream), Fatima Ferdouse (Shrimp & Tuna), Roy Gordon (Abalone), Erik Hempel (Cephalopods, Crab, Groundfish, Lobster & Small Pelagics), Helga Josupeit (Bivalves), Rodrigo Misa (Salmon & Shrimp regional contributions), Angela Ogana (Special Feature), Ferit Rad (Seabass/bream regional contributions), Turan Rahimzadeh (Events section), Katia Tribilustova (Seabass/bream regional contributions) and Weiwei Wang (Fishmeal/oil). For full bios on all of our contributors, please visit www.fao.org/in-action/globefish/background/publication-contributors/en/.

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ACRONYMS AND ABBREVIATIONS

GLOBEFISH HIGHLIGHTS

ABC	ACCEPTABLE BIOLOGICAL CATCH
APA EXPO	ASIA-PACIFIC AQUACULTURE EXPO
CAPPMA	CHINA AQUATIC PRODUCTS PROCESSING AND MARKETING ALLIANCE
DAFF	DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES
EEZ	EXCLUSIVE ECONOMIC ZONE
FAD	FISH AGGREGATING DEVICE
FAPPM	FUJIAN AQUATIC PRODUCTS PROCESSING AND MARKETING ASSOCIATION
FDA	US FOOD AND DRUG ADMINISTRATION
FLAG	FISHERIES LOCAL ACTION GROUPS
FOB	FREE ON BOARD
FSIS	FOOD SAFETY AND INSPECTION SERVICE
GCC	GULF COOPERATION COUNCIL
GIE	CHINA GREAT WALL INTERNATIONAL EXHIBITION CO., LTD.
H&G	HEADED AND GUTTED
IFFO	THE MARINE INGREDIENTS ORGANISATION
IMARPE	INSTITUTO DEL MAR DEL PERU
IUU	LLEGAL, UNREPORTED AND UNREGULATED
MPAS	MARINE PROTECTED AREAS
NASF	NORTH ATLANTIC SEAFOOD FORUM
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
PBO	PIN-BONE-OUT
RF	RECREATIONAL FISHING
TAC	TOTAL ALLOWABLE CATCH
USDA	US DEPARTMENT OF AGRICULTURE
USSEC	U.S. SOYBEAN EXPORT COUNCIL
VASEP	THE VIETNAM ASSOCIATION OF SEAFOOD EXPORTERS AND PRODUCERS

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GLOBAL FISH ECONOMY

GLOBEFISH HIGHLIGHTS

Production increases for key species expected to ease demand pressure on prices in 2017

After a 10 percent drop in the total value of international seafood trade from 2014 to 2015, the projected 2016 figure of US$141.6 billion traded represents a partial recovery of 6.6 percent, with total traded volume remaining approximately constant across all three years at 60–60.5 million tonnes (live weight). However, the fundamental factors behind the apparent decline and subsequent recovery in value were largely different in 2015 and 2016. In 2015, the robust economic performance of the United States of America economy, contrasting with sluggish growth in many other parts of the world, drove up the value of the US dollar versus a broad range of currencies and pushed down the US dollar value of trade conducted in those currencies. Whereas in 2016, with the US dollar stabilized, the increase in traded value was more the result of supply and demand dynamics pushing up prices for a number of important traded species.

In the bigger picture, the growing importance of domestic versus export markets in major producing countries in the developing world is reflected in the contrast between flat traded volumes and steady growth in total production. At the same time, global supply development continues to be defined by stagnation of capture fisheries production even as total supply from the world's rapidly expanding aquaculture industry grows at 4–5 percent per year. At the current rate, the seafood industry will lose its status as the only remaining food sector supplied primarily by natural ecosystems within three years. Indeed, if we consider fish utilized for direct human consumption only, we have been eating more farmed fish than wild since 2014. Given the fundamental differences between aquaculture and capture fisheries in terms of supply chains, cost structure, technology, risk factors, environmental impact, production control, marketing channels, product development, traceability and ecolabeling, the wider implications of this paradigm shift will continue to be the core focus of industry stakeholders for many years to come.

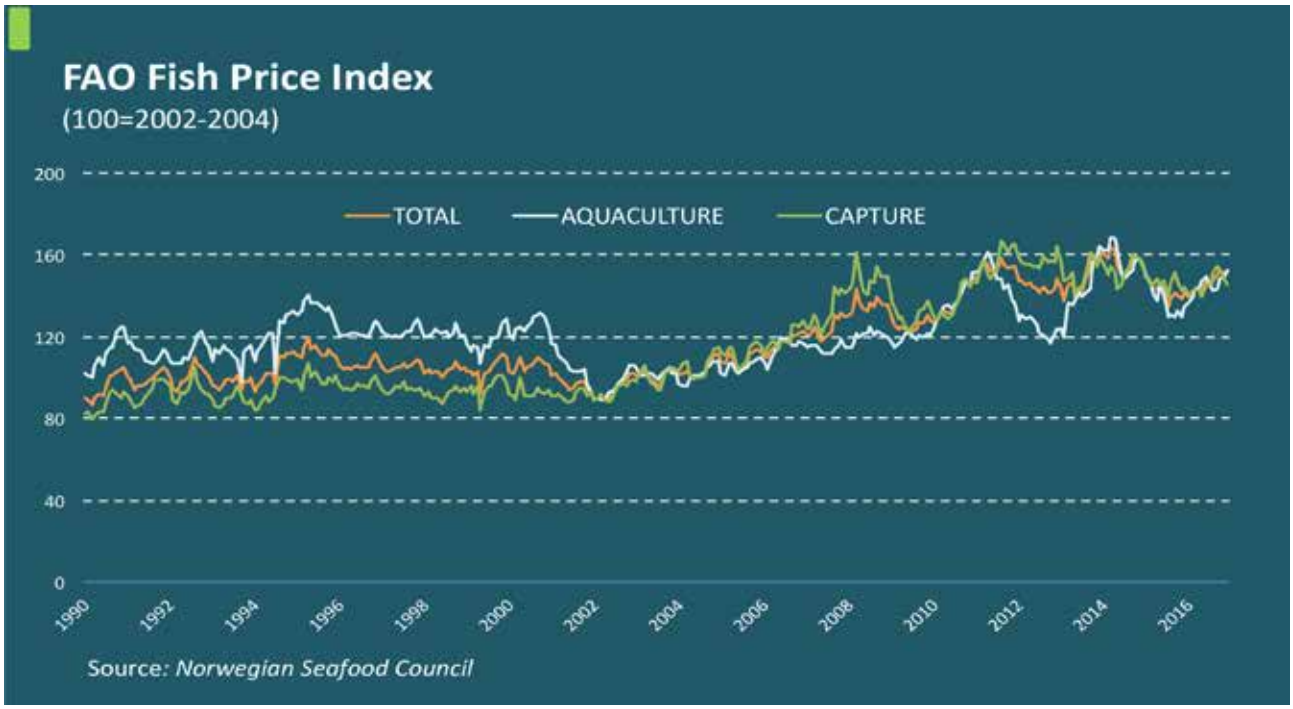
In the shorter term, supply and demand trends in international markets remain the primary concern for industry participants. Fundamentally, growth in real traded seafood prices even as total production volume rises points to strong demand growth for fish and fishery products. Historically, much of this growth has been attributed to income growth in developing regions, together with the associated rise in urbanization and consolidated retailers, but more recently, developed markets are again driving global demand trends. In 2016, it was the world's largest single market for seafood, the European Union (Member Organization), leading growth in seafood imports despite political uncertainty and some economic challenges. The Russian Federation and Brazil, once representing two of the fastest growing major seafood markets in the world, continue to weaken on the back of economic difficulties, although the future outlook for both economies is now somewhat more optimistic. Chinese growth is continuing at a somewhat slower rate, but an enormous and expanding urban middle class can be expected to compete on equal terms with United States of America, European Union (Member Organization) and Japanese consumers for relatively more expensive species such as salmon, shrimp and wild whitefish in the near future. Meanwhile, India is still a relatively small market but with great potential on a steep growth trend, posting a 24 percent increase in seafood import value in both 2015 and 2016.

The Fish Price Index was up 10 index points in December 2016 compared with the same month in 2015, with the major contributor an 18 point rise in aquaculture species. More specifically, the main culprit is the continuing global farmed salmon supply shortage, which has pushed prices to record levels in international markets, although cod, herring, mackerel, octopus, squid, scallops, mussels and farmed shrimp also saw good price gains in 2016. Norway, China, Morocco and a range of shrimp producing countries in Southeast Asia and South America were major beneficiaries in terms of export revenues in 2016. The tuna sector saw raw material

World fish market at a glance

	2014	2015	2016 estim.	Change: 2016 over 2015
		million tonnes		%
WORLD BALANCE				
Production	**164.8**	**169.2**	**172.2**	**1.8**
Capture fisheries	91.1	92.6	91.8	-0.9
Aquaculture	73.7	76.6	80.4	5.0
Trade value (exports USD	**148.3**	**132.9**	**141.6**	**6.6**
Trade volume (live weight)	**60.0**	**59.3**	**60.5**	**2.0**
Total utilization	**164.8**	**169.2**	**172.2**	**1.8**
Food	143.9	147.6	150.9	2.2
Feed	15.8	16.5	16.2	-1.8
Other uses	5.1	5.1	5.1	0.0
SUPPLY AND DEMAND INDICATORS				
Per caput food consumption				
Food fish (kg/year)	19.9	20.2	20.4	1.1
From capture fisheries (kg/year)	9.7	9.7	9.5	-1.9
From aquaculture (kg/year)	10.2	10.5	10.9	3.8

Totals may not match due to rounding.



prices climb in 2016, but the this has had limited impact so far on canned tuna prices.

The coming year is one characterized by political uncertainty in both the European Union (Member Organization) and the United States of America, with Brexit and the Trump administration's protectionist trade policies both developments that could potentially negatively impact seafood trade in two of the world's largest markets. That said, it should also be noted that European Union (Member Organization) consumer demand has demonstrated considerable resistance to the ongoing uncertainties and price hikes up to this point, while the economic outlook for the United States of America and a number of important emerging markets is generally positive, suggesting that there is still significant potential for seafood demand growth in 2017. However, with the end of El Niño and forecasted production increases for a number of key species, the upward pressure on prices will likely be dampened by more plentiful supply.

SHRIMP

GLOBEFISH HIGHLIGHTS

Increased production of farmed shrimp leads to improved international trade

In 2016, imports increased moderately in the United States of America, European Union (Member Organization) and Japanese markets. In China, strong demand was reported as a result of falling domestic production with foreign supplies increasing both directly and indirectly to this market. International prices remained stable throughout 2016.

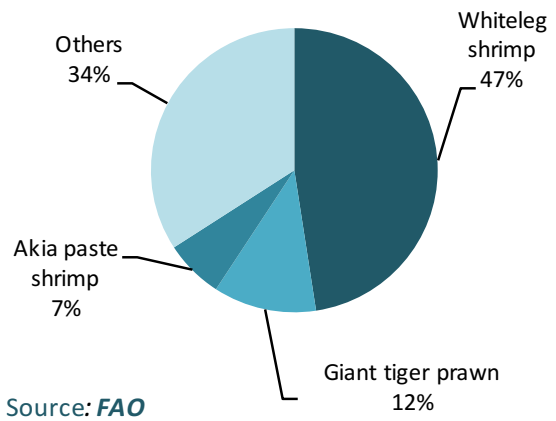
Supply

Mixed production trends for farmed shrimp were observed in Asian producing countries during 2016, with a total estimated production of around 2.5 million tonnes. While disease remained a major concern, adverse weather conditions also had impacts on production, particularly during the first half of the year. Fortunately supplies recovered in India, Indonesia, Viet Nam and Thailand during the second half of 2016.

According to a survey by the *AQUA CULTURE Asia Pacific* magazine, production in Thailand increased to 300 000 tonnes in 2016, whereas there were over 400 000 tonnes harvested in India and Viet Nam each. The Ministry of Agriculture and Rural Development in Viet Nam also reported 250 000 tonnes of black tiger production in the Mekong Delta area in 2016. In addition, Viet Nam imported over 300 000 tonnes of frozen shrimp for reprocessing/re-exporting in 2016. Indonesian production remained around 350 000 tonnes. In China, production remained below 2015 levels, estimated between 600 000–800 000 tonnes. Reports from six major farming provinces in southern China indicated that overall vannamei production declined by more than 150 000 tonnes in 2016.

In Latin America, production was estimated to be between 500 000–600 000 tonnes in 2016, with Ecuador and Mexico as the leading suppliers.

Shrimp production by species, both wild and farmed (2015)



Source: ***FAO***

Headless, shell-on, farmed vannamei, ex-warehouse, New York, USA
Source: *INFOFISH Trade News*

In terms of wild-caught shrimp, shrimp landings in Argentina increased (+17 percent) to total 167 300 tonnes in 2016, despite falling catches during the last two months of the year. Higher landings led to a year-on-year 32 percent rise in Argentinean shrimp exports. In the United States of America, 2016 landings of shrimp were the lowest since 2010.

In terms of prices, vannamei shrimp prices increased marginally during 2016. In the single largest import market, the United States of America, there was a 5.5 percent rise in import prices compared with 2015. US prices for Indian shrimp and Ecuadorean shrimp increased by 2.7 percent and 7.8 percent respectively. However, compared with 2015, the average US import price from Indonesia, Thailand and Viet Nam was lower by 1.2–1.7 percent.

Export summary

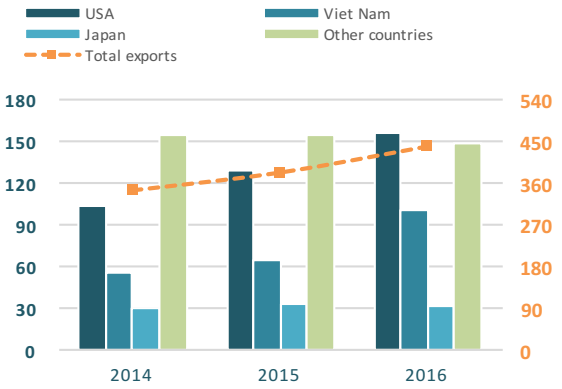
The top five shrimp exporters to the international market in 2016 were: India (438 500, +14.5 percent), Viet Nam (425 000 tonnes, +18–20 percent), Ecuador (372 600 tonnes, +7.8 percent), Indonesia (220 000 tonnes, +21 percent) and Thailand (209 400, +22 percent). Exports from China also increased by 7 percent to total 205 300 tonnes. India's top export markets included the United States of America, Viet Nam, the European Union (Member Organization) and Japan. For the second leading exporter, Viet Nam, all volumes to its main markets of China, the United States of America, the European Union (Member Organization), the Republic of Korea and Australia demonstrated growth when comparing 2016 over 2015.

For Ecuador, the third largest exporter, Viet Nam remained its number one market for shrimp. Compared with 2015, supplies to this market increased by nearly 39 percent reaching 165 700 tonnes in 2016. The total export value was USD 2.6 billion (+12 percent).

Thai shrimp exports maintained growth for the third consecutive year. In volume terms, more than 40 percent of Thai shrimp exports consisted of processed shrimp (85 200 tonnes). The total export value for shrimp was US$2.0 billion in 2016.

Another development was the increased exports of value-added shrimp from India, growing from 10 100 tonnes in 2015 to 23 400 tonnes (+130 percent) in 2016, mostly directed to the US market.

India | Exports | Shrimp
Top three destinations
Unit: 1 000 tonnes



Source: *Ministry of Commerce, India*

Import summary

Most of the large shrimp markets showed positive growth in 2016 compared with 2015. The top markets posting increased imports were the European Union (Member Organization) (+2 percent at 780 000 tonnes), the United States of America (+3.2 percent at 606 000 tonnes), China (+4–5 percent at 350 000–360 000 tonnes) and Japan (+4.6 percent at 223 600 tonnes).

In the emerging markets of the Middle East, imports were lower in most of the Gulf Cooperation Council (GCC) markets.

Japan

Stable consumer demand for shrimp throughout 2016 helped to maintain positive import growth in Japan (223 600 tonnes, +4.6 percent) compared with 2015. Leading suppliers were Viet Nam, Thailand, India, Indonesia and China. Nearly 27 percent of imports consisted of value-added products such as tempura shrimp, cooked shrimp, and sushi shrimp with rice.

United States of America

Except for Ecuador, the United States of America remained the number one destination for the major shrimp exporters. 2016 showed a record amount of shrimp imports to the United States of America as well as declining domestic landings. Both figures together correspond to the US total shrimp supply, which was approximately 3 percent higher than in 2015.

In 2016, the US Food and Drug Administration (FDA) rejected 133 shrimp consignments of shrimp destined to this market due to the existence of prohibited antibiotics. Shipments came from India (95), Viet Nam (17) and China (15). This was the third highest number of refusals reported since 2002.

Among the various product forms imported into this market, supplies increased for raw shell-on, raw peeled and cooked shrimp but declined for breaded shrimp. It is interesting to note that imports of large and medium-large shell-on shrimp (U/15 through 21/25) increased by 9 percent in 2016 reaching almost 90 000 tonnes, whereas imports of the medium sizes (31/40 to 51/60) were stagnant at 87 000 tonnes compared with 2015.

European Union (Member Organization)

Consumer demand for shrimp in the European Union (Member Organization) remained relatively weak in 2016. However, stable prices of vannamei did help to recover total European Union (Member Organization) shrimp imports in 2016 by 2 percent to total 783 900 tonnes. Imports from extra-EU countries, which supply 73 percent of imports, increased only by 1.5 percent while intra-European Union (Member Organization) trade grew by 25 percent. Among the top suppliers, imports increased from Ecuador, Argentina, Greenland and Viet Nam but declined from India. Beginning in late 2016, the European Union (Member Organization) Veterinary Authority has increased the mandatory quality checks of Indian farmed shrimp from 10 to 50 percent, a move that contributed to additional costs for importers and led to diversification of shipments to other markets.

Asia and other markets

Strong regional and intra regional trade in shrimp persisted in Asia during 2016 in order to supplement local demand and facilitate re-exports. Year-on-year imports increased significantly in Viet Nam, China, the Republic of Korea and Hong Kong SAR.

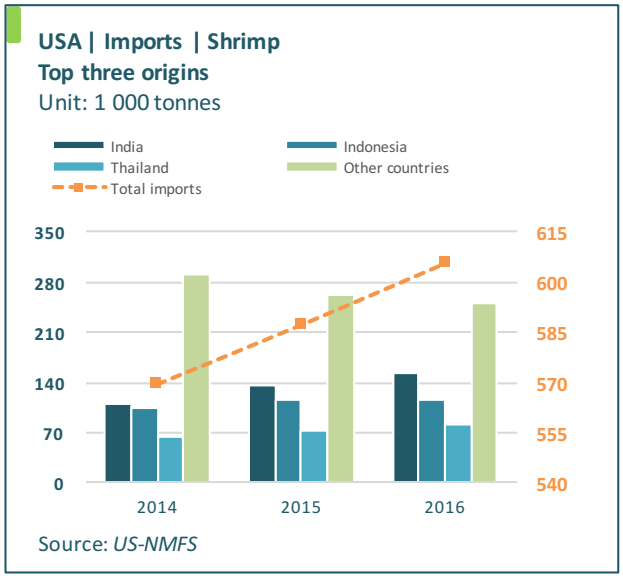
China's shrimp imports in 2016 increased by 4 percent to total 107 000 tonnes with Argentina, Canada, Ecuador, Thailand and Greenland as top suppliers. Some of this trade may not be reported; *Undercurrent News* recently published a report on China's shrimp trade, which stated that "as much as 270 000 tonnes was smuggled across the Viet Nam-China border in 2016" in order for supply to keep up with falling domestic production and increased demand in Viet Nam.

For the last three years, there have been strong growth trends in legal Vietnamese shrimp imports. In 2016, Viet Nam was possibly the largest shrimp importer in Asia. Combined exports of tropical shrimp from Ecuador, India, Thailand, Iran and Malaysia to Viet Nam totaled 303 000 tonnes in 2016, which is 100 000 tonnes higher than in 2015. Another 20 000-30 000 tonnes were supplied by Venezuela, Argentina, Canada and other Latin American sources.

Japanese imports of shrimp (by product)

	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Frozen, raw	200.5	187.3	162.3	153.1	163.0
Cooked, frozen	24.5	24.2	20.1	19.5	19.6
Prepared/preserved	50.3	45.7	36.8	37.5	38.8
Sushi (with rice)	2.4	2.2	2.0	2.4	2.8
Total*	**280.4**	**262.1**	**223.4**	**213.7**	**223.5**

Source: *Japan Customs/INFOFISH*
* including others



US imports of shrimp (by product)

	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Shell-on frozen	215.6	196.8	219.0	223.8	229.1
Peeled frozen	205.4	199.3	230.0	234.8	242.7
Breaded	37.9	36.9	39.4	44.5	44.1
Other products	76.1	76.3	80.2	84.1	89.2
Total	**535**	**509.3**	**568.6**	**587.2**	**605.1**

Source: *NMFS*

EU imports/exports of shrimp

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Imports	Intra-EU	188.7	185.6	212.2	204.4	211.3
	Extra EU	594.1	572.9	583.3	563.0	572.6
	Total	**782.8**	**758.5**	**795.5**	**767.4**	**783.9**
Exports	Intra-EU	258.4	253.4	249.9	243.7	303.9
	Extra EU	81.6	80.0	76.8	73.8	64.7
	Total	**340.0**	**333.4**	**326.7**	**317.5**	**368.6**

Source: *E urostat*

Outlook

The overall global market trend remains dependent on the new season's production expectations (beginning in April in Asian producing countries) as well as the demand pattern in the single largest market, the United States of America. As of this writing, the production trend for 2017 is still unclear.

In the United States of America, seafood consumption has improved in April due to the high demand during Lent season and Easter, which reduced local stocks and induced import demand with the new harvests available in May. The strong

US dollar against currencies in India, Indonesia and other countries is likely to support imports into the US market. Shrimp consumption in Japan also increased in April–May corresponding to the spring festival celebrations. However, any firming up in prices will be a discouraging factor to Japanese importers.

Market focus: Bangladesh

Freshwater prawns displayed at a retail market in Bagladesh

In recent years, the demand for freshwater prawn (Galda) in Bangladesh has evolved strongly in the country's domestic fishery trade. Local demand gets priority over exports due to high domestic demand and good retail prices. During the 2016 production season from October to December 2016, retail prices of large-sized, head-on prawn (4–5 piece per kg) in Dhaka ranged from US$20.00–25.00 per kg. Retail prices for the medium and smaller sizes ranged from US$7.00–12.00 per kg. In comparison, the export price for 4–6 per lb counts of headless shell-on products to the United States of America was US$22.00 per kg.

Supplies from the main producing southern regions, Khulna and Barisal, are diverted to the country's largest urban consumer base (20 million) in Dhaka as well as to popular tourist destinations in Chittagong, Cox's Bazar, and Sylhet. The domestic market in Bangladesh absorbs almost 75 percent of the country's annual production of freshwater prawn, around 45 000–46 000 tonnes. This trend is likely to continue rising due to the growing middle and affluent classes in urban Bangladesh.

TUNA

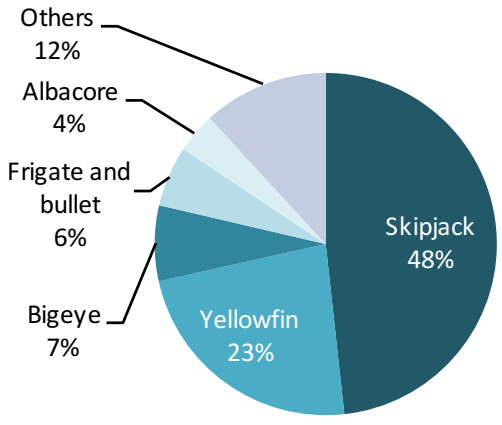
GLOBEFISH HIGHLIGHTS

Frozen skipjack prices grow and remain high

From March–December 2016, frozen skipjack prices for delivery to Thailand increased by 15—20 percent compared with the same period in 2015. The price continued to be high through early 2017.

For canned tuna, export and consumer prices did not increase much in 2016. Despite these relatively stagnant prices, import demand for processed tuna failed to recover during 2016 with demand slow in the traditional western markets. In the non-canned tuna market, which targets a different segment of consumers, trade remained stable.

Tuna production by species, both wild and farmed (2015)



Source: ***FAO***

Supply

During 2016, prices of frozen tuna for canning persisted at higher levels than in 2015. Indeed, the average import price of skipjack in Bangkok was nearly 21 percent higher in 2016, at an average of US$1 430 per tonne compared with US$1 100 per tonne in 2015. These higher prices did not seem to deter imports of frozen raw material tuna into Thailand from growing by 8 percent to total 700 000 tonnes in 2016. Annual imports of raw frozen tuna into Spain during 2016 were also higher, totaling 162 600 tonnes, demonstrating 15 percent growth. Spanish canners also imported an additional 66 100 tonnes of cooked loins for reprocessing. In China, raw material imports remained stable at 85 000 tonnes in 2016; 80 percent of these were frozen skipjack.

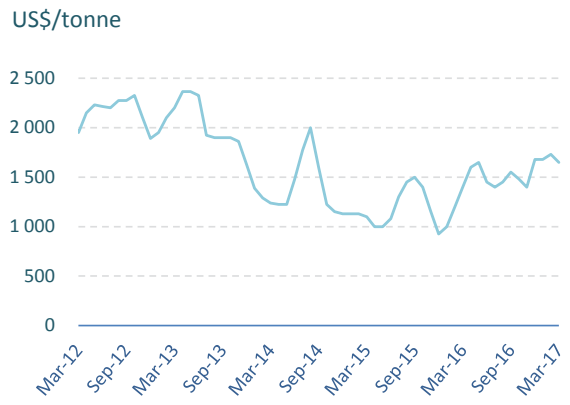
This rising price trend for frozen skipjack continued during the first quarter of 2017. During this time, the frozen skipjack price was recorded at US$1 676 per tonne for delivery to Bangkok; nearly 40 percent higher than the same period a year ago. Prices in the Bangkok market began declining in mid-March.

Tuna catches in the Eastern Pacific have been good in March. Canneries in Ecuador are holding healthy inventories of raw material. Taking advantage of the zero-duty status that went into effect in January 2017, Spanish canneries are buying more pre-cooked loins from Ecuador.

In the Western and Central Pacific, fishing has been moderate. Thai canneries are holding more than adequate frozen inventories possibly due to high imports in 2016 and slow demand for finished goods from export markets. Subsequently, skipjack prices have started to weaken. In the Indian Ocean, fishing has also been reported to be moderate with canneries there noting healthy stocks of material.

The fish aggregating device (FAD) closure in the Atlantic Ocean ended on 28 February 2017, however fishing continues to be poor in that region. Raw tuna stocks are low with some canneries possibly having to stop operations until fishing improves. Poor fishing has also led to skipjack and yellowfin prices rising. Import prices for cooked, double-cleaned yellowfin loins have increased as the zero-duty quota for Thailand, Indonesia and the Philippines has ended.

Prices
Skipjack: Thailand



4 lb/pc & up, CFR Bangkok, origin: Western Pacific
Source: *INFOFISH Trade News*

Fresh and frozen tuna market (non-canned)

United States of America

For 2016, US imports of non-canned tuna once again confirm the positive demand trend. Imports of fresh and frozen whole tuna and loins reached 60 000 tonnes (+11 percent), with imports of whole/dressed air-flown tuna and frozen fillet/loins totaling 24 000 tonnes and 32 300 tonnes respectively. The average import price of the popular and shelf-stable frozen tuna loins was between US$11.00–12.00 per kg.

Since 2014, the United States of America has remained the world's leading importer of fresh air-flown tuna in volume; Japan holds the second position.

Japan

After the continuous downturn in fresh/chilled tuna imports into Japan for more than five years, volumes grew by 6 percent to nearly 20 000 tonnes compared with 18 500 tonnes in 2015. This was a result of increased supplies of farmed bluefin from Mexico (4 200 tonnes, +27 percent), which are cheaper compared with wild-caught bluefin. High-priced wild-caught jumbo bluefin made up 600 tonnes of the total imports of fresh bluefin, supplied by Canada and the United States of America.

The Japanese market maintained its preference for frozen sashimi grade tuna in 2016, largely due to its longer shelf life, with imports of frozen tuna increasing by 6.5 percent year-on-year. Frozen loin imports also increased marginally to total 41 800 tonnes against 41 400 tonnes in 2015. The frozen loin total consisted of 25 400 tonnes of redmeat quality bigeye and yellowfin and 15 000 tonnes of bluefin.

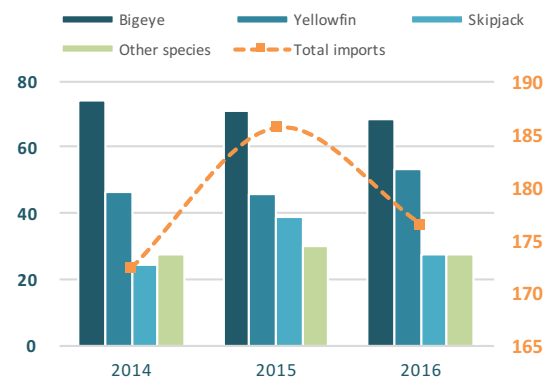
Consumer demand for sashimi will peak as usual in

Japanese tuna landings* (by species)

	2012	2013	2014	2015	2015
	(1 000 tonnes)				
Skipjack	262.9	257.5	243.8	234.4	217.5
Albacore	65.8	58.2	53.4	46.1	36.9
Yellowfin	31.5	28.4	33.4	38.0	36.7
Bigeye	25.5	27.5	29.3	28.0	26.9
Bluefin	2.6	3.4	4.2	5.2	5.8
Total	**388.3**	**375.0**	**364.1**	**351.7**	**323.8**

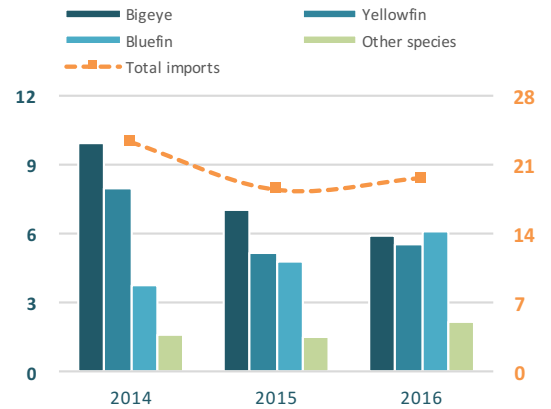
Source: *MAFF, Japan/INFOFISH*
*includes distant water catches

Japan | Imports | Tuna | Frozen
Top three species
Unit: 1 000 tonnes



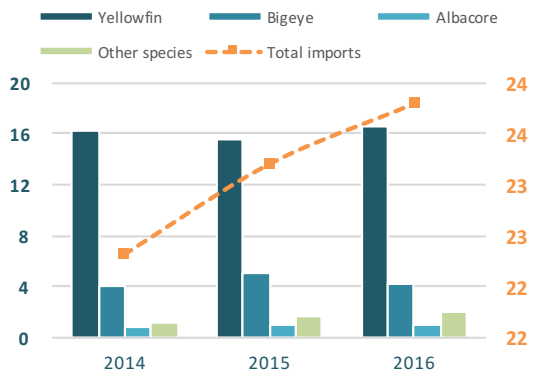
Source: *Japan Customs/INFOFISH*

Japan | Imports | Tuna | Fresh/chilled
Top three species
Unit: 1 000 tonnes



Source: *Japan Customs/INFOFISH*

USA | Imports | Tuna | Fresh
Top three species
Unit: 1 000 tonnes



Source: *US-NMFS*
(includes fresh loins/fillets)

Japan during the spring festival months of April and May.

Canned tuna market

Summary

Thailand, Ecuador and Spain were the top three exporters of processed and canned tuna in 2016.

In Asia, Thailand and the Philippines reported 0.3 percent and 2 percent declines in exports respectively. China reported a 7 percent rise in exports, with increased supplies of cooked loins to Spain and Portugal.

Ecuador, the world's second largest exporter of canned tuna, demonstrated a 2.4 percent rise in cooked loins and canned tuna exports during 2016 against 2015. However, total canned/processed tuna exports to its largest market, Spain, declined by almost 5 percent to total 45 600 tonnes. This decline was attributed to a 15 percent fall in cooked loin supplies to this market. However, exports of cooked loin from Ecuador were higher to Italy and to Portugal at 9 200 tonnes (+72 percent) and 1 800 tonnes (+29 percent) respectively.

In the Indian Ocean region, exports from Mauritius remained stagnant to total 57 600 tonnes. Increased exports of cooked loins were reported to Italy and Portugal. Exports of canned tuna to its main market, the United Kingdom, suffered a 13.4 percent drop compared with 2015, possibly due to more than adequate local stocks.

Spain demonstrated export growth of 2.4 percent in 2016 over 2015. The leading markets were Italy, France, Portugal, the United Kingdom, the Netherlands and Germany. Besides selling high-value processed tuna, Spain also re-exported cooked loins to tuna canneries in Portugal, Italy and France.

The Spanish canned/processed tuna sector has been growing from 2014–2016, generally selling to high-value processed tuna markets in the European Union (Member Organization). However, outside of the European Union (Member Organization) market, exports have also increased.

In general, import curves for canned tuna in most of the traditional developed markets were negative in 2016, even though the average import price did not increase much. Reduced consumer demand for conventional canned tuna and poor sales resulted in inventory buildups in these markets.

United States of America

Overall, imports of prepared tuna (cooked loins, cans and pouches) declined by 6 percent in 2016 compared with 2015 to total 190 700 tonnes, indicating weaker consumer demand despite average import prices being 1.3 percent lower. Overall demand for lightmeat products (skipjack and yellowfin) remained weak during 2016.

In contrast, imports of whitemeat albacore (canned and pouched) increased by 20 percent, despite the fact that the average import price was about US$1–2 per kg higher than skipjack products.

In Canada, there was a 3 percent decline in canned tuna imports due to falling supply from major supplier Thailand (-6.4 percent) compared with 2015. Imports increased year-on-year by 33 percent from the Philippines, 20 percent from Italy and 9 percent from Viet Nam.

Canned tuna demand also suffered in many markets in Latin America. Imports declined in Colombia to 28 500 tonnes (-3.3 percent), in Chile to 15 400 tonnes (-20 percent) and in Peru to 13 700 tonnes (-13 percent).

European Union (Member Organization)

Throughout 2016, demand for canned tuna in the European Union (Member Organization), particularly among western European markets, remained disappointing to non-EU exporters. As of November 2016, European Union (Member Organization) imports of canned tuna from extra-EU countries declined by almost 3 percent compared with 2015 to total 422 900 tonnes.

Among the leading markets, the United Kingdom, Spain, France and Germany showed falling imports of canned tuna in 2016 compared with 2015.

Imports of canned tuna did increase in some of the Eastern European markets, namely the Czech Republic, (5 200 tonnes), Hungary (2 400 tonnes) and Romania (3 600 tonnes).

Asia/Pacific

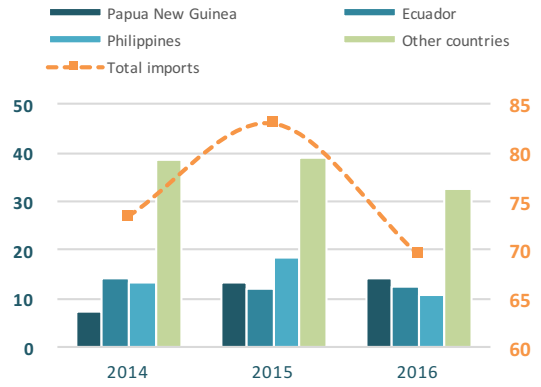
Japan and Australia were the leading importers of canned tuna in the Asia/Pacific region. In 2016, the Japanese market maintained its positive demand trend with imports increasing by almost 11 percent to 60 400 tonnes compared with 54 500 imported in 2015. Thailand, the Philippines, Indonesia and Viet Nam were the top suppliers. About 10 percent of total processed tuna imports in Japan consisted of *katsuobushi* products, which had a unit value of US$7.00–11.00 per kg compared with US$4.8 per kg for canned tuna. The leading suppliers of *katsuobushi* were the Philippines, Indonesia, Viet Nam, China and Maldives.

Australia is considered a market for higher-value tuna. However, the continuing weakening of the Australian currency against the US dollar has limited canned tuna imports into this market, with this declining import trend starting in 2014. 2016 imports fell by 5.4 percent against 2015 to total 44 900 tonnes. Imports increased into New Zealand (5 300 tonnes) by 5 percent.

In East Asia, demand for canned tuna improved in Hong Kong SAR and Singapore but weakened in Malaysia, China and Taiwan Province of China.

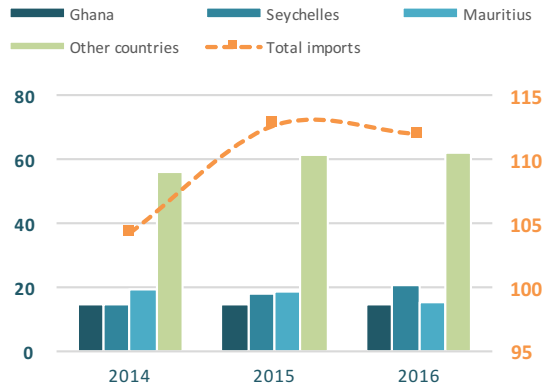
Import trends in the emerging but important markets in the Middle East and West Africa were mixed during 2016, which has been mirrored in Thai canned tuna exports to these markets. Canned tuna imports from Thailand to Egypt in 2016 were estimated to total 75 000 tonnes, which is 3 000–5 000 tonnes higher than in 2015. Thai exports to Libya also increased marginally to total 37 600 tonnes. Exports to Saudi Arabia declined by 18 percent to total 22 900 tonnes but increased to the United Arab Emirates at 11 900 tonnes (+7 percent) and Syria by almost 40 percent (60 100 tonnes). In West Africa, Thai exports increased to Algeria (+22

Germany | Imports | Tuna | Canned
Top three origins
Unit: 1 000 tonnes



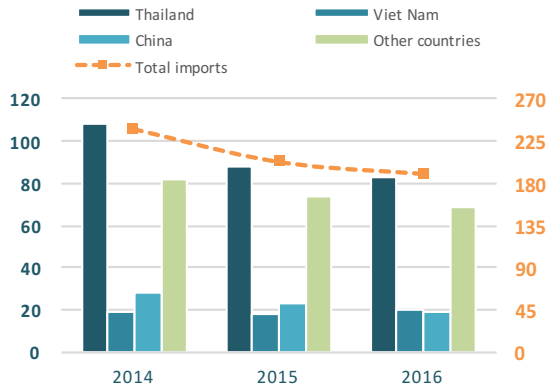
Source: *Eurostat/German Customs*

UK | Imports | Tuna | Canned
Top three origins
Unit: 1 000 tonnes



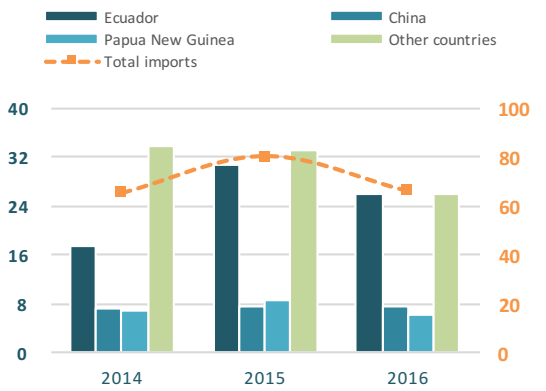
Source: *Her Majesty's Customs & Excise*

USA | Imports | Tuna| Canned/Prepared
Top three origins
Unit: 1 000 tonnes



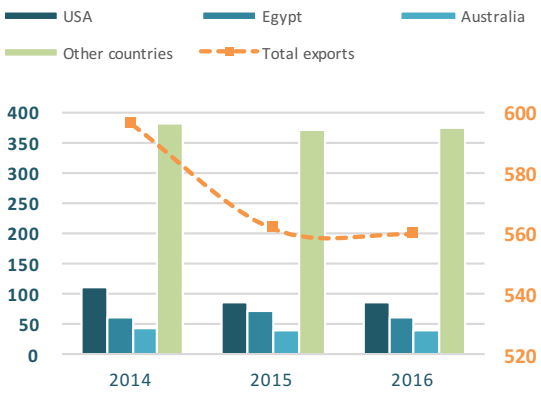
Source: *US-NMFS*
(includes cooked loins)

Spain | Imports | Tuna loins | Cooked
Top three origins
Unit: 1 000 tonnes



Source: *Agencia Tributaria*

Thailand | Exports | Tuna | Canned/processed
Top three destinations
Unit: 1 000 tonnes



Source: *Thai Customs*

percent) and to Morocco (+10 percent) but declined to Tunisia (-26 percent).

Outlook

Demand for non-canned tuna will increase in the United States of America and Japan corresponding to the strong demand for fish during the Easter holiday season and the spring festival in April and May.

Considering the moderate to good catches in the Eastern and Western Pacific, prices of skipjack may ease from their present high level until the FAD closure season begins in July. Skipjack prices for delivery to Bangkok have already started to weaken, which could be a trendsetter for other markets.

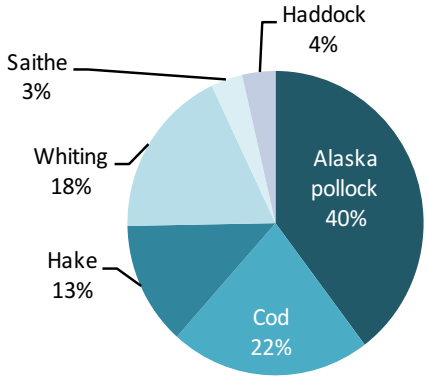
GROUNDFISH

GLOBEFISH HIGHLIGHTS

Slight decline in supplies; for cod, stabilizing prices

Total supplies of groundfish (including farmed whitefish) are expected to be slightly higher in 2017 than in 2016, but prices are not expected to fall significantly. After a slow start to the cod season, fishing is getting back to normal.

Groundfish production by selected species, both wild and farmed (2015)



Source: ***FAO***

During the recent North Atlantic Seafood Forum (NASF) in Bergen, much attention was focused on China and its role in the international seafood market. A Rabobank analyst claimed that China is set to impact the whitefish market considerably in the next ten years, largely due to the fact that Chinese consumers are seeing significant improvements in their purchasing power and have a growing appetite for coldwater whitefish like cod. Thus, Chinese buyers will compete aggressively in the global market for cod and Alaska pollock as well as farmed whitefish like pangasius and tilapia.

Also in the Chinese market, there are increasing food sales through the Internet. At present, Chinese consumers are spending about US$40 billion annually on online food purchases, but this is expected to grow to US$180 billion, demonstrating important implications for seafood purchasing.

Resources

Supplies of whitefish increased by some 2.3 percent in 2016, according to *Kontali Analyse*. While most species showed an increase, supplies of pangasius declined. The largest increase in supplies was in hake and Alaska pollock. In 2017, total supplies of whitefish are expected to increase by about 2.3 percent with farmed whitefish accounting for all of the increase. Production of farmed whitefish is expected to grow by 4.5 percent, to 11.3 million tonnes, while wild-caught groundfish is expected to decline by 0.7 percent to 7.3 million tonnes.

Global supplies of both cod and haddock are expected to be lower in 2017 than last year. Estimates presented at the Groundfish Forum suggested that supplies of Atlantic cod would total about 1.26 million tonnes in 2017, while supplies of haddock were estimated at 376 000 tonnes (both estimates in whole fish weight).

Russian Federation and Norwegian fisheries associations have agreed to a partial, self-imposed ban on trawl fishing for cod in the Barents Sea during the 2017 season. An agreement was reached in September last year that in effect will keep Russian Federation and Norwegian vessels from fishing in waters that have not yet experienced regular fishing activity, as well as in areas that may be vulnerable to trawl fishing. In addition, the vessels will help to map the seabed in areas around Svalbard.

In mid-December 2016, the North Pacific Fisheries Management Council decided to set the total allowable catch (TAC) for Alaska pollock in the Gulf of

Alaska at 209 000 tonnes in 2017 and 163 000 tonnes in 2018. This represents a reduction compared with 2016, when the TAC was set at 258 000 tonnes. The main reason behind this decision is the expectation that the acceptable biological catch (ABC) will fall.

The Russian Federation decided to further grow its TAC for Alaska pollock by 3 percent for 2017, to total 1.89 million tonnes. In 2015 the Russian Federation TAC was set at 1.72 million tonnes and in 2016 at 1.84 million tonnes.

Landings and processing

Cod landings in Norway during January were somewhat down compared with last year, resulting in higher prices to the fishers. Total exports of fresh skrei (Arctic cod, *Gadus morhua*) dropped by 56 percent in January 2017 compared with 2016, but export prices rose by 11 percent.

Russian Federation Alaska pollock producers have been focusing on fillet production in place of headed and gutted (H&G) and surimi due to low prices for the latter products. Even though prices for pin-bone-out (PBO) fillet blocks are very low, the producers prefer to stay with this product rather than moving back into surimi. The weak ruble also makes this production slightly better paid.

Trade

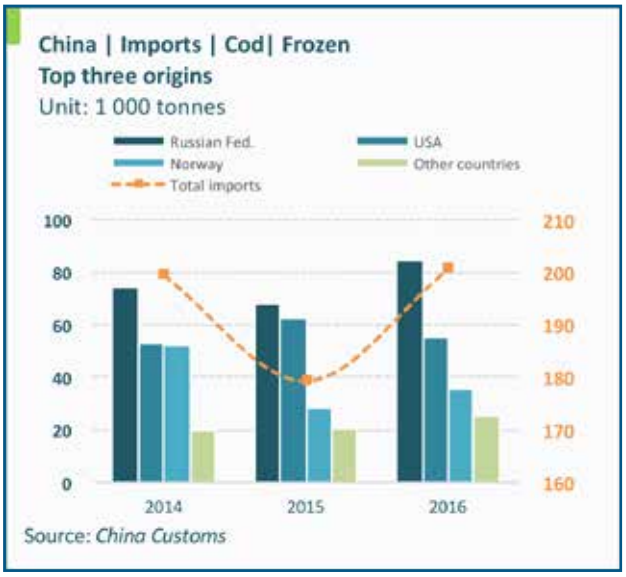
Norwegian cod is increasingly being exported un-processed, simply because producers and exporters make a greater profit on this than on processed products. Indeed, the statistics show that fresh and frozen cod exports have increased significantly over the past ten years, while exports of frozen processed and salted/dried cod have stagnated or declined in volume. The first-hand value of fresh cod is currently at a record high, according to a Nordea analyst.

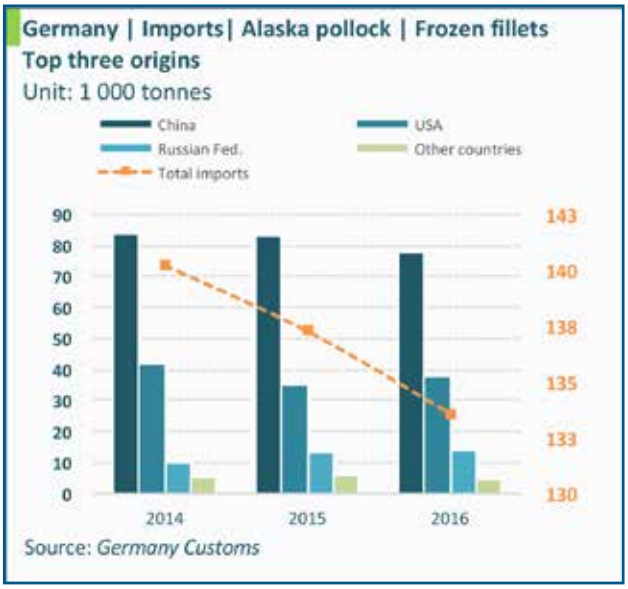
Norway has been targeting the Chinese market for a long time. As early as 1998, the Norwegian Seafood Council established a representative office in China, and exports have grown steadily since, until stopping abruptly after the 2010 Nobel Peace Prize was awarded to Chinese dissident Liu Xiaobo. Since then, Norwegian authorities have worked hard to improve Norway's diplomatic relations with China, and now things are returning to normal. This means that Norwegian seafood can once again be imported into China in greater quantities. However, a number of technical issues remain outstanding and need to be sorted out before trade can resume in full.

Norwegian whitefish exports recorded a new high for the third year running in 2016. Total whitefish exports amounted to NKr13.8 billion (US$1.7 billion) in 2016. The increase in value was greatest for fresh and frozen products, while traditional products like klipfish (salted and dried cod fish), and stockfish (air-dried cod) struggled. Exports of klipfish dropped by 8 percent to 80 800 tonnes worth NKr3.7 billion, while the export value of stockfish dropped by 8.1 percent compared with 2015.

German imports of frozen cod fillets increased significantly during 2016. Total imports amounted to 171 000 tonnes worth US$653 million. This represented an increase of 27.6 percent by volume and 12.1 percent increase by value, indicating a price reduction per kg. All three major suppliers experienced increases: China by 52.1 percent to 73 000 tonnes, Poland by 15.2 percent to 38 000 tonnes, and Denmark by 11.1 percent to 20 000 tonnes.

German imports of Alaska pollock fillets declined slightly (-3 percent by volume) in 2016 to 122 900 tonnes. China alone accounted for 58.3 percent of this, or 71 700 tonnes, followed by the United States of America (28.3 percent of total) and the Russian Federation (10.4 percent of total).





Surimi

The A season for the Alaska pollock fishery in the Alaska Bering Sea started on 20 January. The Alaska pollock stock is considered to be stable, with the TAC remaining at 1.345 million tonnes, just 0.4 percent higher than last year. Production of surimi from this fishery is expected to amount to about 100 000 tonnes, while a similar volume is expected from the B season later.

Demand for Alaska pollock fillets in the United States of America is firm, while demand in Europe is weak. Surimi demand in Europe may be a little stronger. At the same time, surimi demand in Japan is edging upwards. In November last year, consumer spending on surimi in Japan rose by 3 percent, and this was the first time in nine months that a rise in consumer spending on surimi was registered.

Prices

Exporters are predicting that cod will to some extent replace salmon in a number of market sectors in 2017 because of the recent extreme high price of salmon. Over the past 18 months, cod prices have only increased by 16 percent, whereas salmon prices have increased by a significant 70 percent.

The Icelandic trawlers strike in the beginning of the year resulted in a shortage of cod, which translated into very high prices for Norwegian cod in February. However, Norwegian landings were also low, so the general supply situation was tight. The Icelandic strike ended on 18 February, with Icelandic fishers wasting no time in getting back to the fishing grounds. However, Icelandic fish could not reach the markets in United Kingdom and Europe until the end of February/beginning of March, and in the meantime Iceland lost trade to Norway, Canada and Alaska.

Prices for fresh Icelandic cod are expected to drop now that the Icelandic fleet is back in operation and in a hurry to fill their quotas after the strike. With the new Icelandic landings reaching the market, some expect a price collapse. The markets that were served by Iceland have had to find supplies elsewhere, and this new competition is likely to affect prices on Icelandic cod.

As Icelandic cod fisheries get back on track and landings in Norway pick up after a slow start, prices will come down.

For black cod, prices on the US west coast are extremely high at the moment. In early February, prices up to US$12.25 per pound for fish larger than ten pounds were registered. Whether they will stay high is a different matter. Black cod quotas in the Bering Sea, Aleutian Islands and the Gulf of Alaska increased by 6.5 percent for 2017 compared with

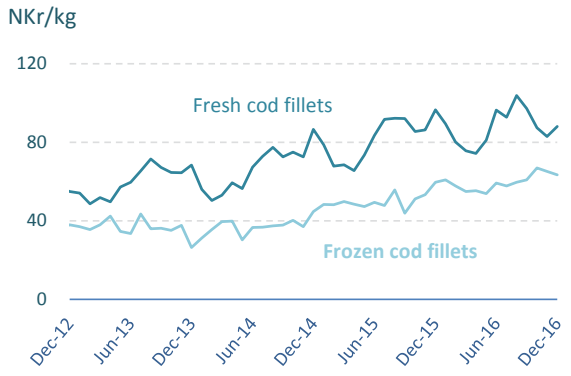
2016, though this was still 8 percent below the 2015 quota. Black cod is increasing in popularity around the world, especially in Japan, and this may help keep the prices high.

In Japan, demand for black cod (also called sablefish) has been very high, while at the same time domestic landings have been weak. This pushed prices far up on the Japanese market during the winter. At the wholesale level, prices of US$20.10–20.27 were registered. Other Asian countries also have a strong demand for this fish.

Leftover stocks of last year's Alaska pollock from the A season are pushing Alaska pollock prices down. Although there is a price difference between last year's product and the 2017 product, the high cold storage holdings are having a negative effect on prices this year. Fishing companies in the Russian Federation and the United States of America as well as processors in China are feeling the impact of these low prices. Prices for single frozen blocks, PBO, are just half of what they were back in late 2008, when they peaked at US$4 500 per tonne.

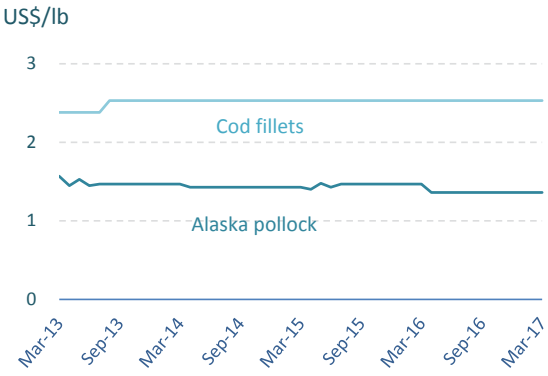
Several participants at the NASF complained that Alaska pollock prices were low and falling. However, *Kontali Analyse* showed that prices were relatively stable through 2016. The outlook for 2017 is a different matter.

Export price
Cod: Norway



Source: *Norwegian Seafood Council*

Wholesale prices
Groundfish: USA



Source: *INFOFISH Trade News*

Outlook

The outlook for the global groundfish sector in 2017 seems to be one of more limited supplies of wild-caught fish with a slight increase in total supplies of farmed whitefish. Cod prices are forecasted to come back down to normal after a high start. Alaska pollock prices are dismal and likely to fall further. Global markets will be on the look out for China, to see how this market develops.

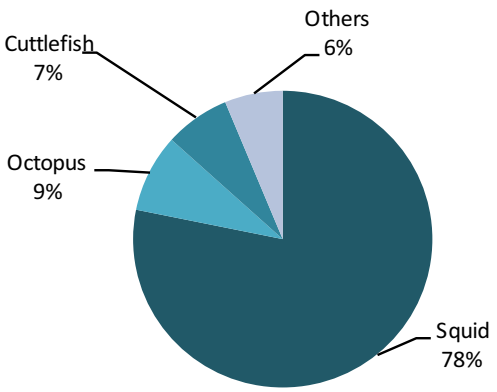
CEPHALOPODS

GLOBEFISH HIGHLIGHTS

Strong squid prices last year, but will it last?

International squid prices grew significantly last year in all import markets. However, the outlook for this year's landings is good, so there may be renewed downward pressure on prices. For octopus, prices are strong and rising. Demand has particularly grown in the United States of America.

Cephalopods production (2015)



Source: ***FAO***

Octopus

Global octopus landings seem to be on an upward trend at the moment. This trend was clear in 2015, when landings increased by 6.7 percent, and it seems to have continued into 2016. An increase of landings does not appear to have affected prices in some places. For instance, in Galicia, the value of landings in 2016 was higher than any year since 2010.

US demand for octopus is improving, and according to reports, it is the "millennials" who are the drivers behind this trend. Octopus has proven extremely popular in tapas restaurants and poke bars.

Total US octopus import volumes have been on a rising curve since the beginning of the millennium. In 2000, US imports amounted to 12 900 tonnes (product weight). Imports grew until 2006, when they had reached 17 400 tonnes, but then fell again until 2010, when they bottomed out at 12 100 tonnes. Since then, US imports have grown significantly to 22 800 tonnes in 2015. In 2016, however, there was a decline to 20 800 tonnes.

Since 2011, Spain has become a major supplier of octopus for the US market. It is estimated that about 86 percent of Spanish octopus exports end up in the United States of America, with the rest distributed between Japan and the European Union (Member Organization). Another important supplier to the US market is the Philippines. Spanish exports of octopus to the United States of America grew from 1 200 tonnes in 2011 to 7 000 tonnes in 2016 (+483 percent over the period), while Philippine exports of octopus to the United States of America during the same period declined from 5 150 tonnes in 2011 to just 2 900 tonnes in 2016 (-44 percent).

As of the end of 2016, no prices had been set for West African octopus. Landings were moderate, but observers still expected the total quota to be caught by March 2017. Most of the catch consisted of size seven octopus. Demand in Europe, which prefers larger sizes, was reported to be strong.

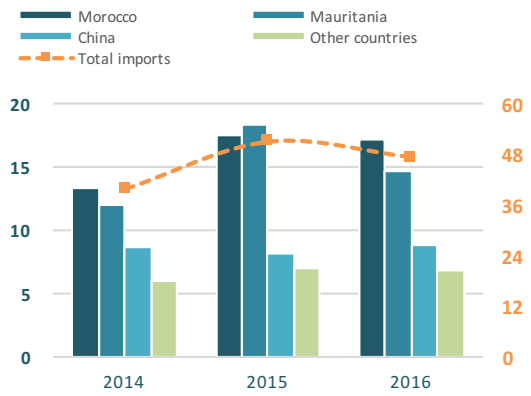
Japan imported 7 percent less octopus in 2016 compared with 2015. Most of the reduction in this trade was caused by lower imports from Mauritania. Other main suppliers were Morocco, China and Viet Nam.

Spanish octopus imports also fell in 2016. Import volume declined from 55 600 tonnes to 47 000 tonnes (-18.3 percent), but the value of imports only fell by 3.5 percent, indicating a general price increase

for imported octopus. Supplies from Mauritania and Portugal were down by 5.8 percent and 14.3 percent, respectively. The main supplier, Morocco, shipped practically the same amount in 2016 as in 2015 (about 26 000 tonnes).

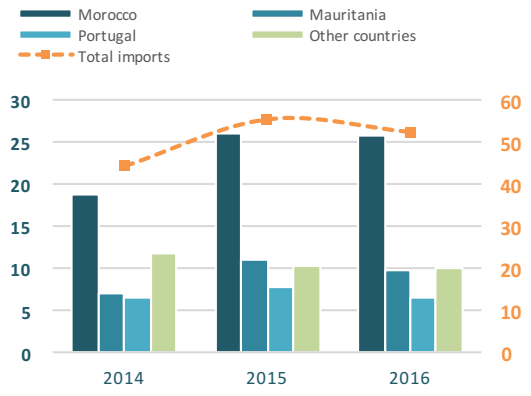
Prices for octopus are strong at the moment and continuing to rise. Prices are expected to remain fairly stable over the next three to six months.

Japan | Imports | Octopus
Top three origins
Unit: 1 000 tonnes



Source: *Japan Customs*

Spain | Imports | Octopus
Top three origins
Unit: 1 000 tonnes



Source: *Agencia Tributaria*

Squid

Argentine squid catches from April to December 2016 were very low, in fact, at their lowest level in 20 years. During the last three quarters of 2016, catches fell by 55 percent to 57 500 tonnes compared with the same period in 2015. Falkland Island (Malvinas) catches were even lower, with squid landings from January–September 2016 99 percent lower than the same period in 2015, totalling just 2 000 tonnes. These lower landings, coupled with increased demand for calamari in the United States of America as well as in Europe, pushed prices upwards to their highest levels in five years.

In early January, Chinese vessels operating in international waters near Argentina reported that catches were poor with the squid caught consisting of only small sizes. Near Peruvian waters, catches were somewhat better. Due to these scarce supplies from Argentine waters, Chinese buyers were looking for other sources of supply in January, and some were buying North Pacific squid as well as Peruvian giant squid to meet Chinese demand. It is reported that production of Peruvian squid was good, and this might ease the supply situation for processors.

The squid season in Argentina started earlier than usual this year. Usually, the season starts in February, but this year it started in mid-January south of the 44° south latitude. The early start was justified by the distribution, population structure and migratory patterns of the Illex squid, according to scientists. The first two weeks of squid fishing in the Argentine 200 mile zone ended well, with an average of 20 tonnes caught per vessel per day. Illex landings during January 2017 were at about 3 000 tonnes, compared with just 45 tonnes during the same period in 2016. However, while this was a good start, it is not necessarily indicative of a good season. For instance, in 2016, the start of the season was also good, but later catches declined. In 2016, the total catches ended at only 60 300 tonnes, compared with 126 700 tonnes in 2015 and 168 700 tonnes in 2014.

Prices for Argentine Illex firmed up during the first weeks of the season, probably due to the fact that catches outside the Argentine 200 mile exclusive economic zone (EEZ) were poor. At first, prices rose to about US$2 800–3 000 per tonne free on board (FOB), but they have since fallen slightly, to around US$2 400–2 600 FOB.

As a result of the 2016 El Niño, the Peruvian giant squid fishery was poor. This year, however, it seems to have recovered somewhat. Fishing has been better, particularly in the north of Peru, and this means higher supplies of raw material for the industry. Prices have been stable as fishers try to hold back on landings in an effort to maintain price levels.

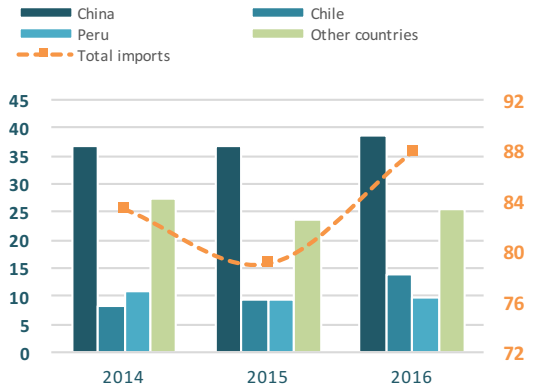
Japanese squid imports increased by 11.7 percent by volume in 2016 compared with 2015. Chile and the Republic of Korea showed increases in shipments, while the major supplier, China, only increased exports slightly (+4.9 percent). Unit import prices increased, however, with the total value of imports increasing from US$305.6 million to US$363.4 million (+18.9 percent.)

Spanish squid imports also increased in 2016 compared with 2015, both in volume and value. Import volume increased by 17.3 percent to 95 100

tonnes and in value by a significant 44.5 percent to US$421.8 million.

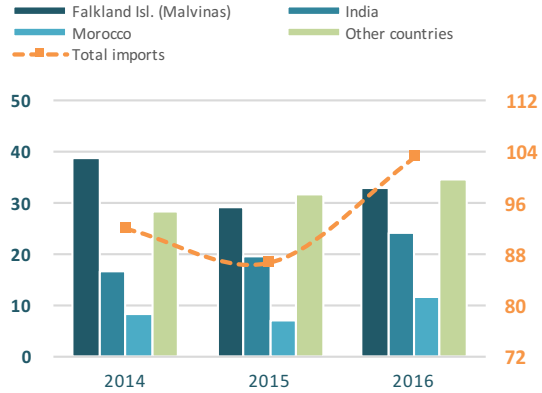
In the United States of America, squid import volumes in 2016 showed no movement compared with 2015. Imports amounted to 65 800 tonnes in 2016, compared with 65 000 tonnes in 2015. Prices however increased, with import prices growing from US$215.6 million to 270.0 million (+25.2 percent).

Japan | Imports | Squid
Top three origins
Unit: 1 000 tonnes



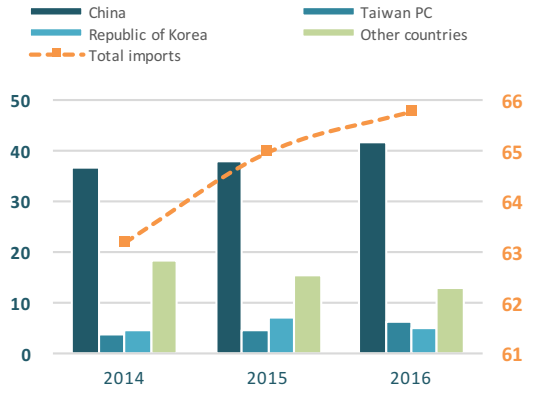
Source: *Japan Customs*

Spain | Imports | Squid
Top three origins
Unit: 1 000 tonnes



Source: *Agencia Tributaria*

USA | Imports | Squid
Top three origins
Unit: 1 000 tonnes



Source: *NMFS*

Prices
Squid: Italy

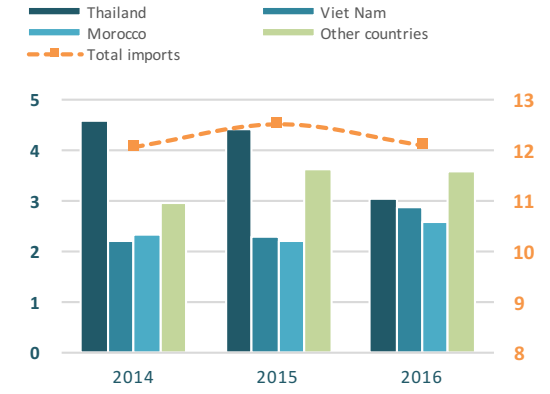
Whole, FAS, middle size, origin: South Africa
Source: *European Price Report*

Cuttlefish

The cuttlefish trade was a bit stagnant worldwide. Japanese imports showed a slight decline in volume (-3.2 percent) but the value of imports grew. Spanish imports showed the same trend: a slight decline in imported volume with a slight increase in value. Major suppliers to Japan were Thailand, Viet Nam and Morocco, while the main suppliers to Spain were Morocco, France and China.

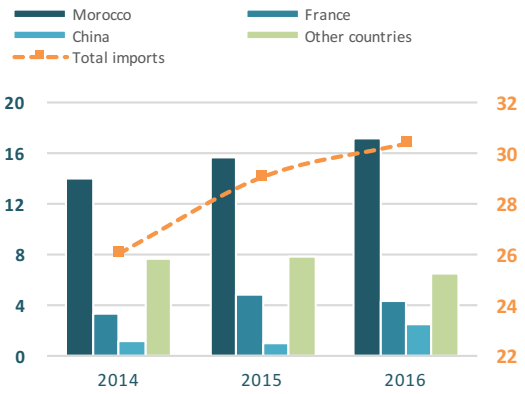
Cuttlefish prices in major markets like Japan and Spain have been on a declining trend for some time now, but in 2016 there was a turn-around. Japanese import prices, which stood at US$10.70 per kg in 2012, had dropped to US$7.70 per kg in 2015, but edged upwards to US$8.80 per kg in 2016 (+14.3 percent). A similar trend was observed in Spain. Spanish import prices for cuttlefish bottomed out in 2013 at US$3.10 per kg, but in 2016 had risen to US$4.20 per kg.

Japan | Imports | Cuttlefish
Top three origins
Unit: 1 000 tonnes



Source: *Japan Customs*

Spain | Imports | Cuttlefish
Top three origins
Unit: 1 000 tonnes



Source: *Agencia Tributaria*

Outlook

The outlook for the squid season remains uncertain. Early catches off Argentina were good, but that does not mean the entire season will be. Prices have increased for both squid and octopus, and are expected to remain at present levels for some time until the landing situation is clearer.

TILAPIA

GLOBEFISH HIGHLIGHTS

Prices expected to remain stagnant for 2017

African markets imported an average of 83 000 tonnes of whole frozen and breaded tilapia in 2016. Asian and Latin American markets continue to absorb much of their own domestic tilapia production, as it remains an affordable source of protein. The EU markets remained depressed in 2016, however imports for premium quality tilapia increased.

China

With production problems in 2016 due to severe winter weather, total exports of tilapia stayed stable, amounting to 393 000 tonnes. Interestingly, frozen fillet exports declined by 4.5 percent to 146 400 tonnes, although it remained the main product exported. This decline was compensated for by increases of 0.14 percent and 8 percent in the whole frozen and breaded category. African markets were the main destination for these two tilapia products. Approximately 64 percent of Chinese whole frozen tilapia exports and 17 percent of Chinese breaded tilapia exports went to African markets in 2016.

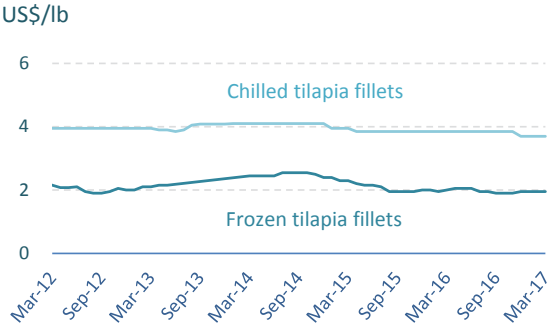
The United States of America and Mexico are the two largest markets for Chinese tilapia, although year-on-year exports declined to the United States of America in 2016. Iran has emerged as the third largest market for Chinese frozen tilapia fillets, growing by a significant 53 percent in 2016 to reach 16 400 tonnes.

United States of America

The market weakened in 2016 both in volume and value largely due to the significant decline in supplies of Chinese frozen tilapia fillets. China supplies about 73 percent (143 700 tonnes) of total US tilapia imports. However, imports of whole frozen tilapia increased from China, with US preference for whole frozen keeping imports of this category firm. China and Taiwan Province of China are the main suppliers of whole frozen tilapia to the US market.

In terms of prices, the average import price declined by 20 percent for frozen fillets and 15 percent for whole frozen in 2016 compared with 2015. Demand is now growing due to strong sales expectations during the Lent season, with a likely increase in imports in the first quarter of 2017. Improved production from China in 2017 due to milder weather has also strengthened growth in US imports.

Prices
Tilapia: USA



Chilled tilapia fillets: Primary wholesale, NY, USA, origin: Costa Rica; Frozen tilapia filltes: 3-5 oz/lb, EXW NY, USA, origin: China
Source: *INFOFISH Trade News*

Latin America

2016 was a difficult economic year for Brazil. The decline in the economy and purchasing power of consumers brought significant issues for tilapia suppliers. In addition, the rising unemployment rate affected the availability of skilled labor and thus the productivity of the entire value chain. The recession continued into 2017.

An increase in the costs of Brazilian production was reflected in the growing prices of whole tilapia. The average price of whole tilapia was R$14.00 per kg in the third quarter of 2016 and rose to R$14.66 per kg in the fourth quarter. Frozen fillets also followed this growing price trend, with prices for frozen fillets going from R$35.31 per kg in the third quarter to R$34.59 per kg in the fourth. For fresh fillets, price stability between the third and fourth quarter was

observed in most markets.

Adding to these challenges - the Brazilian state of Ceará, one of the largest producers and consumers of tilapia in Brazil, experienced a serious water crisis during the last half of the year. This crisis inevitably affected production and as a result, reduced the supply of the market.

In Honduras, domestic consumption of tilapia was about 3 600 tonnes in 2016 according to the Secretary of Agriculture and Livestock. In terms of trade, Honduras remains the leading fresh tilapia fillet exporter to the US market in Latin America. During 2016, 9 100 tonnes were exported, worth US$60 million.

In Mexico, the government seeks to expand programs and actions related to the production, processing and consumption of Mexican tilapia. According to the Agro-Food and Fisheries Information System, 128 000 tonnes were produced last year, of which 12 000 tonnes in live weight (9 percent) were destined for exports. The main producing states were Chiapas, Tabasco, Guerrero, Estado de México and Veracruz.

EU

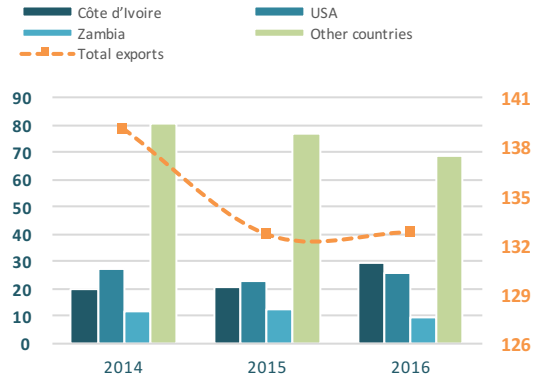
Total imports of tilapia into the EU during 2016 were lower by -15 percent in volume to total 34 400 tonnes. The largest suppliers, China and Viet Nam, supplied 10 percent and 17 percent less during 2016 compared with the previous year. Despite depressed overall demand, demand is firm for premium tilapia as reflected in the higher imports of frozen tilapia fillets from Indonesia, Thailand and Taiwan Province of China. Frozen tilapia fillets from these countries are known to be premium quality meaning higher prices when compared to imports of frozen fillets from other origins. Average import prices of frozen tilapia fillets in 2016 from these sources were US$6.20 per kg (Indonesia), US$6.10 per kg (Thailand) and US$13.30 per kg (Taiwan Province of China).

Asia

Tilapia is a popular species consumed throughout Asia, mostly as whole fish. Trade is largely in live or fresh/chilled fish with some frozen products. Tilapia is also widely available in other forms, namely fillets and steaks. Bones and heads are also popular products. Most countries in Asia are producers of tilapia with production largely being channeled to their domestic or regional markets.

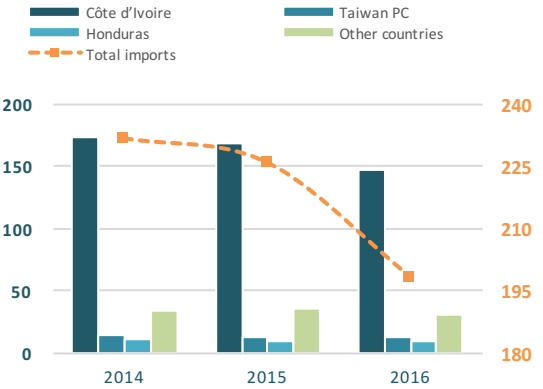
At the fresh fish market in Singapore in February 2017, fresh/chilled domestic tilapia was sold at US$4.80 per kg while frozen, sashimi-quality tilapia fillets from Taiwan Province of China was priced at US$4.20 per kg. Live black and red tilapia in supermarkets were priced at US$4.20 per kg. The average import price of frozen tilapia fillets in January 2017 in Singapore was US$4.46 per kg; 23 percent higher than the same period in 2016 while the average import price for whole frozen tilapia weakened slightly to US$1.00 per kg.

China | Exports | Tilapia | Whole frozen
Top three destinations
Unit: 1 000 tonnes



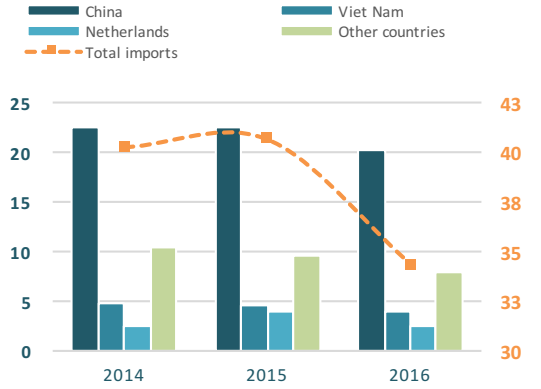
Source: *China Customs*

USA | Imports | Tilapia
Top three origins
Unit: 1 000 tonnes



Source: *NMFS*

EU | Imports | Tilapia
Top three origins
Unit: 1 000 tonnes



Source: *GTIS*

RECENT NEWS

Tilapia development projects: Fiji and Belize

In an effort to scale up the tilapia industry in Fiji to a commercial level, a brood stock management training was held to assist the key players in the industry, including farmers and Fiji's Ministry of Fisheries. The training was provided by the EU, funded by the Increasing Agricultural Commodity Trade (IACT) project, which is expected to strengthen tilapia production to help grow the market. In Fiji, there are about 303 active tilapia farmers and this number is expected to increase.

A five-year long investment by Taiwan Province of China in Belize's aquaculture industry is expected to help over 100 tilapia farmers and hundreds of other unemployed people across Belize. Beginning in 2012, a US$5 million investment worked to develop a tilapia hatchery to produce 150 tonnes of fingerlings per year. The project also developed and delivered training workshops on how to sustainably produce and market the best quality farm-raised tilapia.

Outlook

African markets are clearly poised for further growth, while demand is expected to remain firm in Asia and Latin America.

For the United States of America, Lent demand will result in positive growth in imports during the first quarter of 2017. In general, prices are not likely to see much increase, especially as production levels have already started growing in China.

The EU market looks positive for premium tilapia, although this product is unlikely to ever develop into a significant market. As in the United States of America, Lent demand bolstered EU tilapia imports during the first quarter of 2017.

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PANGASIUS

GLOBEFISH HIGHLIGHTS

China becomes largest market in Asia

In 2016, Latin America and Asia together accounted for nearly 50 percent of global pangasius imports (whole frozen and frozen fillets) with both regions demonstrating positive growth compared with 2015. China has become the largest market for Vietnamese pangasius in Asia, overtaking Thailand in 2016.

Viet Nam

Viet Nam, the largest producer of pangasius in the world, accounted for 72 percent of global pangasius production in 2015. The Vietnam Association of Seafood Exporters and Producers (VASEP) reports that the farming areas in the Mekong Delta have been reduced by over 3 400 hectares in 2016 with production totalling 1 million tonnes. Production has remained relatively flat over the past six years, declining in 2014 and 2015. 2015 production figures were estimated at around 800 000 tonnes.

For 2016, the export value of Vietnamese pangasius strengthened by almost 10 percent compared with 2015 to reach a total value of US$1.71 billion, according to VASEP. This export value growth rate was particularly focused on the United States of America and China while the markets in Europe remained depressed. In volume terms, EU imports of Vietnamese pangasius declined by 5 percent in 2016 compared with 2015, to total 111 300 tonnes.

To further exacerbate this weakening demand in the EU, there have been some recent happenings in the EU market that have not been positive for Vietnamese pangasius exports. Carrefour, a major retail grocery chain in Europe, announced in late January 2017 that it would stop selling Vietnamese pangasius fish in some markets (Spain, Belgium, Italy and France, the home country of this supermarket chain). This decision was attributed to their belief about the adverse impacts pangasius farms have on the environment in terms of water pollution from production waste. In addition to this, also in January 2017, a Spanish TV station aired negative footage about the Vietnamese pangasius industry. The footage showed pangasius being farmed in unhygienic cages and fed with non-industrialised feed such as dead fish and other food waste. It attributed these poor practices for the reason behind the low price of Vietnamese pangasius while comparing it with the industry in Spain. The scale of how these developments will impact the EU pangasius market remains to be seen, but it is certainly not helpful in an already depressed market. VASEP has remained positive, reporting that exports to the EU may be affected somewhat but not significantly.

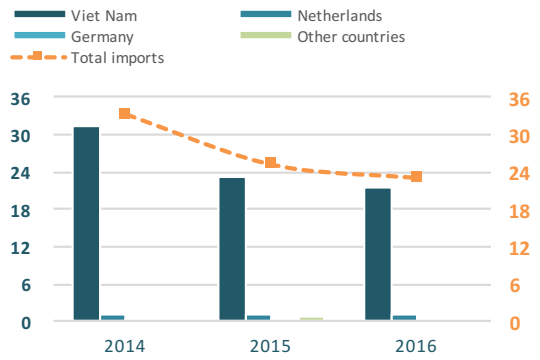
Exports to the single largest market for Vietnamese pangasius, the United States of America, were up by almost 23 percent in value to reach US$387.4 million. This growth took place despite competition with tilapia. Meanwhile, the anti-dumping duty and catfish inspection programme will continue to affect Viet Nam's pangasius exports to the United States of America in 2017 as the number of processors eligible for export will be lower under this programme. The new US catfish inspection programme now falls under the regulatory jurisdiction of the US Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS), rather than the US Food and Drug Administration (FDA).

The programme requires all businesses processing *Siluriformes* fish products for the US market to have their names included on the list of businesses eligible for export to the United States of America.

The United States of America

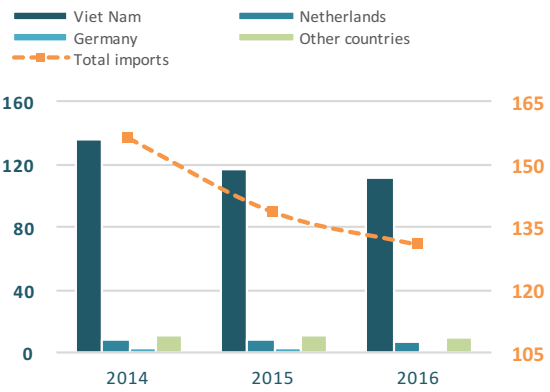
Imports of frozen catfish were up 21 percent in 2016 compared with 2015. Although pangasius accounted for the largest share of imports, supplies also increased for other frozen catfish species. In this category, China, Thailand and Viet Nam were the main suppliers.

Spain | Imports | Pangasius | Frozen fillets
Top three origins
Unit: 1 000 tonnes



Source: *Agencia Tributaria*

EU | Imports | Pangasius
Top three origins
Unit: 1 000 tonnes



Source: *GTIS*

US imports of fresh and frozen catfish fillets (by origin)

Fillets	2012	2013	2014	2015	2016
			(1 000 tonnes)		
Viet Nam	103.1	111.2	100.6	108.8	131.4
China	3.4	6.6	7.5	5.1	5.3
Thailand	0.1	0.0	0.0	0.0	0.0
Others	0.7	0.6	0.2	0.1	0.0
Total	**107.2**	**118.5**	**108.2**	**113.9**	**136.7**

Source: *U.S. Department of Commerce, Bureau of Census*

Latin America

Approximately 90 percent of the pangasius that enters the Latin American markets are frozen fillets, primarily supplied by Viet Nam. In 2016, a 125 000 tonnes were imported into Latin American markets, which is a 12 percent rise compared with 2015. The three largest markets were Mexico, Brazil and Colombia, taking up shares of 46 percent, 27.5 percent and 19.5 percent shares respectively.

Asia

As indicated, China became the largest market for pangasius (whole and fillets) in Asia in 2016 overtaking Thailand. Roughly 33 500 tonnes of pangasius were imported into China, doubling its imports compared with 2015. Thailand, now only the second leading importer, imported 24 800 tonnes in 2016 (+20 percent) followed by Singapore (17 600 tonnes). In Thailand, wholesale prices of fresh pangasius in early February ranged from US$0.70-0.90 per kg. In the Singapore retail market in early March, fresh (previously frozen) pangasius was sold at US$17 per kg. Average import prices in 2016 were US$1.83 per kg from Viet Nam, which was almost an 11 percent decline from average imports prices in 2015.

Japan and India are other Asian markets that continue to show strong demand. The average import price paid in Japan for frozen pangasius fillets was US$3.15 per kg. In India, pangasius is predominantly consumed through the catering trade. In 2016, imports of frozen pangasius fillets into Japan was up by 55 percent in volume to 4 100 tonnes and 16 percent up to India at 4 700 tonnes.

Outlook

Since the start of the Tet holidays (Viet Nam's Lunar New Year) in late January, pangasius prices have increased in Viet Nam, indicating good demand as supplies continue to be short and buying interest grows from China. However, industry sources in Viet Nam report that the rise in price levels are not unusual after the holidays, especially considering the leaner season in the coming months. The US market will remain strong supported by the demand from Lent season in March/April. Due to the negative press, the EU market will remain in the doldrums.

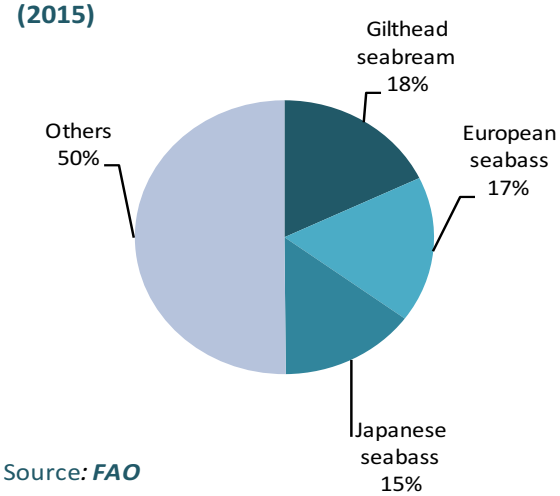
SEABASS & SEABREAM

GLOBEFISH HIGHLIGHTS

Seabass prices hold firm in 2016 but bream prices suffer due to Turkish volumes

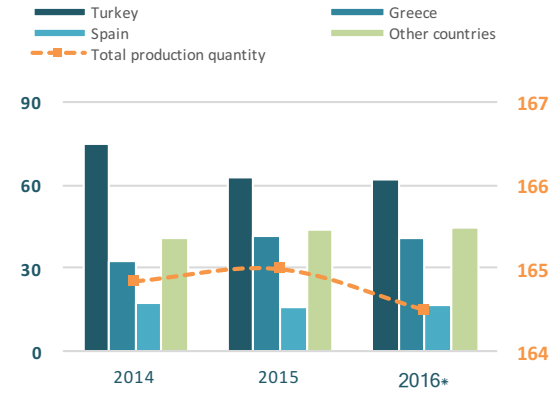
The sense of cautious optimism that returned to the European farmed seabass and seabream sector in 2015 on the back of improved prices was somewhat dampened in 2016 as the market was hit by unexpectedly large volumes of farmed Turkish bream. With further increases in supply now on the horizon, all stakeholders must take steps to prevent a repeat of the long period of unsustainable low prices that previously crippled the Greek industry.

Seabass and seabream production (2015)



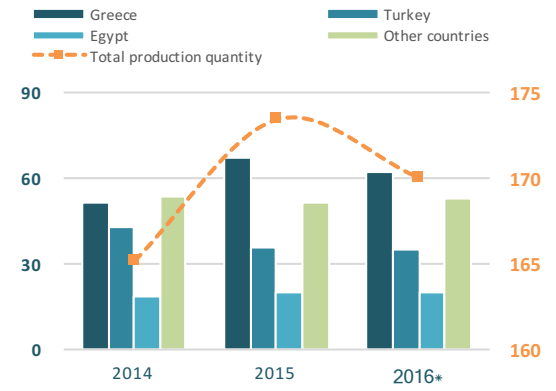
Source: ***FAO***

Top three global producers of seabass
Dicentrarchus labrax
Unit: 1 000 tonnes



Source: *FAO* (until 2015), *Estimate

Top three global producers of seabream
Sparus aurata
Unit: 1 000 tonnes



Source: *FAO* (until 2015), *Estimate

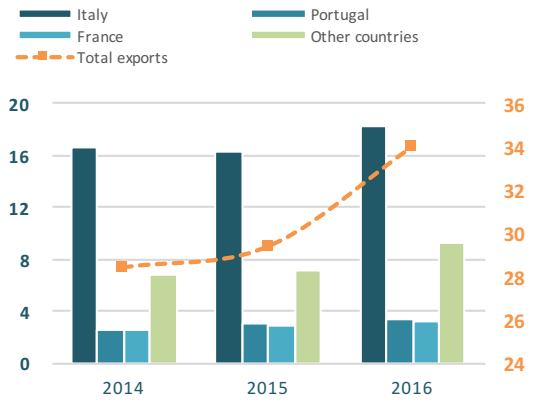
Although bass and bream are generally farmed together as part of the same operation with the markets relatively integrated, there has been a noticeable divergence of the two species over recent years in market terms. While bass prices have remained stable, bream prices have been volatile as supply tightened and then rapidly expanded in 2015 and 2016 respectively. It is also worth noting that bass has found a foothold in the potentially lucrative US market, whereas US buyers have still shown little to no interest in imported bream. This preference could potentially be due to the fact that bass is a more familiar fish to US consumers, whereas bream remains lesser known. Addressing the imbalance in the bream market before prices fall further is now a priority for the Mediterranean industry as a whole.

Despite previous forecasts pointing to an overall production decline, both Turkey and, to a lesser extent, Greece, reported significant increases in bream export volumes in 2016. As a result, bream export prices began falling in early summer and have dropped steadily since then. By December, the average Greek export price for fresh whole bream was €4.59 per kg while the equivalent price for bass was €5.27 per kg. Total revenue taken in by Greek exporters rose due to higher volumes, but this does not translate into profitable business when €5 per kg is considered the minimum required breakeven price. In the case of bass, an average export price of around €5.50 per kg has now been maintained each year since 2014.

Turkish exporters, meanwhile, have significantly benefitted over recent years from a sustained depreciation of the Turkish lira versus the euro. Combined with the fact that the Turkish bass and bream sector was government subsidized until recently, this has meant that Turkish suppliers have been able to offer a price to European buyers that has been very difficult for the majority to resist. This reality is reflected in 2016 trade statistics, which show large increases in imports of Turkish fish, particularly bream, by almost all major EU markets. Even Greek importers have tapped into the plentiful supply of cheap bream, posting a 205 percent increase in imports of fresh bream from Turkey in volume terms.

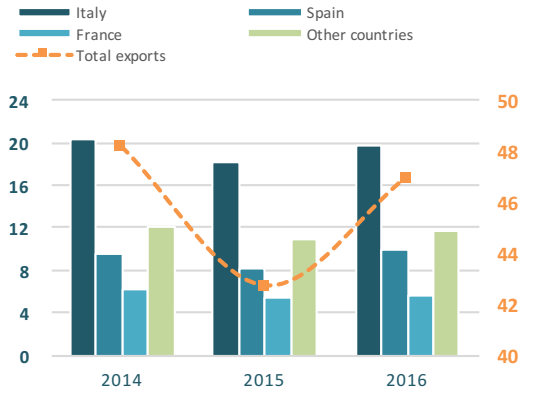
After the downward trend in Turkish bream prices in the last quarter of 2016 and early 2017, prices recovered moderately in February and March with ex-farm (ice-packed) prices growing about 20 percent in Turkish lira terms. The increase was relatively greater for smaller sizes, increasing by about 30 percent for 200-300 g bream compared with 11 percent for the 800-1 000 g sized class. Turkish bass prices continue to weaken however, as farmers try to sell large-sized fish before maturation during the spawning season (March–April). Greek export prices for both species have shown little movement so far in 2017, but can be expected to begin climbing as summer approaches and the weather improves.

Greece | Exports | Seabass | Fresh
Top three destinations
Unit: 1 000 tonnes



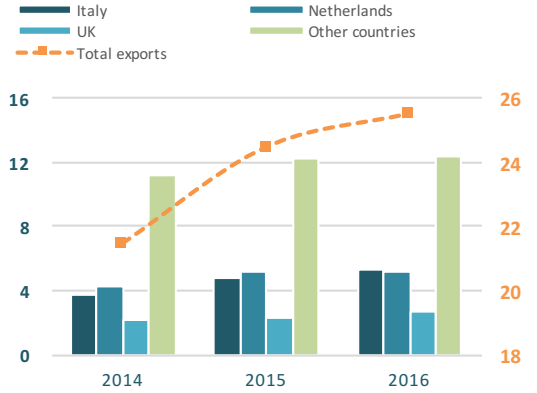
Source: *Eurostat*

Greece | Exports | Seabream | Fresh
Top three destinations
Unit: 1 000 tonnes



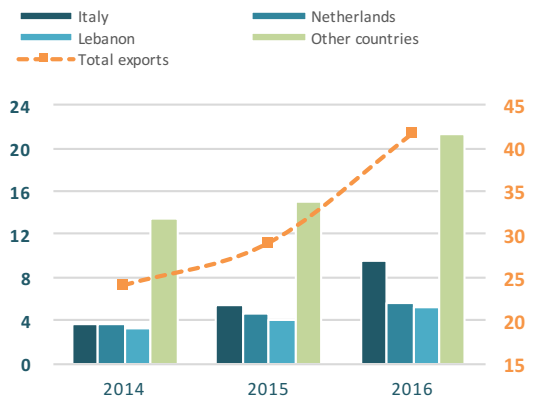
Source: *Eurostat*

Turkey | Exports | Seabass | Fresh
Top three destinations
Unit: 1 000 tonnes



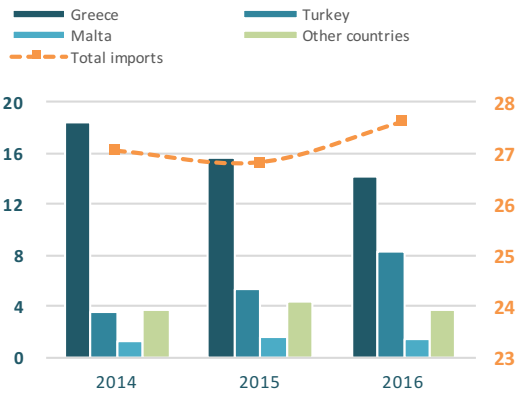
Source: *State Institute of Statistics*

Turkey | Exports | Seabream | Fresh
Top three destinations
Unit: 1 000 tonnes



Source: *State Institute of Statistics*

Italy | Imports | Seabream | Fresh
Top three origins
Unit: 1 000 tonnes

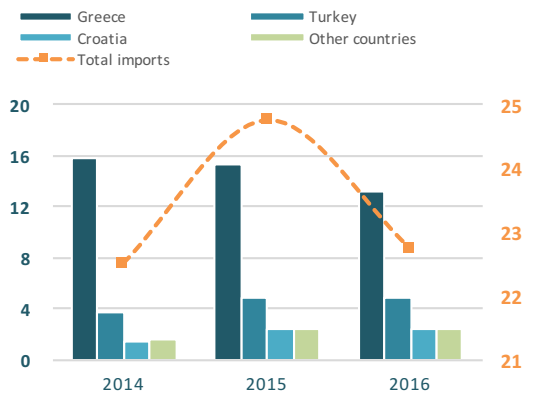


Source: *Eurostat*

Italy

Italy is the largest market for bass and bream in Europe, supplied by both Greece and Turkey in addition to its own domestic production. Traditionally, domestically produced fish has been sold as a premium product and thus does not compete directly with imported supply. Italian fish continues to be sold at the supermarkets for often times 50 percent more than imported fish with consumers pushed to buy Italian products by fishmongers. Imported fish constitutes a much larger market, however, with approximately 55 000 tonnes sold each year compared with 15 000 tonnes of Italian fish. Underlying demand in Italy remains firm for both species, and import volumes were up overall in 2016. However, with more bream available in Greece, Turkey and Spain, Italian buyers have been available to negotiate lower prices.

Italy | Imports | Seabass | Fresh
Top three origins
Unit: 1 000 tonnes



Source: *Eurostat*

Spain

The Spanish market differs from its Italian counterpart in that it is supplied primarily by its own domestic aquaculture sector, which also produces significant volumes for export. Historically a major bream producer, Spain has seen a rapid increase in bass production over the last decade, bringing harvest volumes almost level with bream (estimated 2016 figures were 18 000 tonnes and 21 000 tonnes for bass and bream respectively). Although lower prices this year are certainly a factor, the Spanish market is seemingly well capable of absorbing both growing domestic supply and rising import volumes, suggesting underlying demand is strengthening.

France

Out of the three major Mediterranean markets for bass and bream (Italy, Spain and France), France is where Turkish exporters continue to find it most difficult to establish themselves, despite their significant pricing advantage. For French consumers, the closer the source of produce, the better, and if buying imported fish at all, they would much sooner buy from Greece or Spain than Turkey. Spain, in particular, is directing its growing bass production to the French market where prices are very healthy. However, even French buyers took advantage of the surplus of Turkish bream available in 2016, almost doubling their import volumes of the product.

Other markets

In the Russian Federation, overall demand for bass and bream has stagnated over the last two years due to higher consumer prices, a weaker currency and general economic deterioration. Russian Federation imports of fresh bass accounted for 2 000 tonnes in 2016, declining 24 percent compared with the previous year. Imports of fresh bream were more

stable reaching 1 700 tonnes (+1 percent) in 2016, reflecting the stimulating effect of lower bream prices. Almost 100 percent of the bass and bream imported by the Russian Federation is supplied by Turkish companies, with very minor volumes originating from Morocco and Tunisia.

In the United Kingdom, strong import demand was seen earlier in 2016 when buyers were targeting cheap Turkish fish, but this activity diminished in year-on-year terms as the effects of Brexit took hold in the last two quarters.

Outlook

The major challenge presently facing the bass and bream sector is the higher harvest volumes expected in the largest producing countries of Greece, Turkey and Spain over the next two years. It should be recognized that production forecasts in the sector have not been particularly reliable in the past, but in fact, realized supply volumes have historically been more likely to exceed forecasts rather than vice-versa. Although the still fragile Greek industry is particularly at risk, the Mediterranean industry as a whole will need exert a coordinated effort to cut production costs, develop a more varied product range for the modern consumer and diversify its export markets if sustainable price levels are to be maintained. Continuing development of the Turkish domestic market is another focus area for the sector, as Turkish consumers are an important source of demand that will be needed to absorb the additional supply volumes.

It also remains to be seen exactly how total supply growth will be split between the currently oversupplied bream market and the relatively stable bass market. Industry sources in Turkey suggest that bass accounted for around 60 percent of the 400 million juveniles to be used for on-growing in 2017, with the remainder being bream. The same industry sources report that landings of anchovy, the main source of raw material for production of good quality local fishmeal, have not been sufficient to meet demand in Turkey, with the result that some large-scale vertically integrated bass and bream aquaculture companies have been looking for alternative supply sources and are acquiring fishmeal plants in countries like Mauritania.

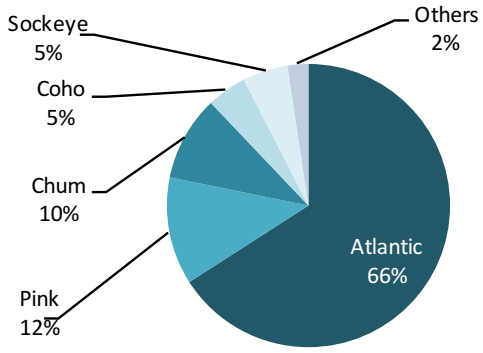
SALMON

GLOBEFISH HIGHLIGHTS

Severely elevated prices in 2016 has the salmon sector searching for solutions

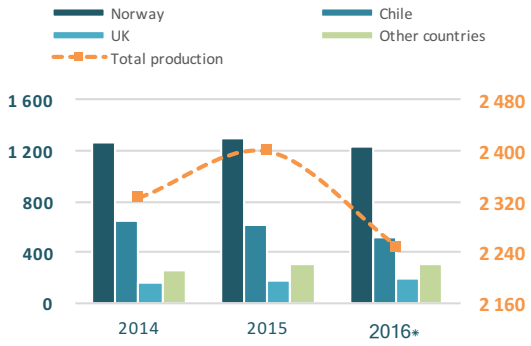
With high prices now the new normal, industry stakeholders all along the supply chain are focusing on identifying effective ways of coping with the widening gap between supply and demand. A number of countries are viewing the situation as an opportunity to develop their salmon aquaculture sectors, while interest in land-based farming options is increasing. On the market side, product developers are looking to maximize the value to consumers using a minimum of raw material.

Salmon production by species, both wild and farmed (2015)



Source: *FAO*

Top three global producers of farmed Atlantic salmon
Unit: 1 000 tonnes



Source: *FAO* (until 2015)
*estimate

Norway

Growth in export revenue for the Norwegian farmed Atlantic salmon industry over the last three years has been truly remarkable. This significant growth has been driven by low global supply, positive demand developments in major markets and favourable exchange rate conditions. In 2016, sea lice challenges contributed to a drop in Norwegian production of some 6 percent which compounded the global supply shortage resulting from the mass algal bloom mortalities in Chile, sending prices soaring. Even as total Norwegian export volume declined in 2016, total export value broke the all-time record, while the average export price for fresh whole salmon was NKr60.1 (US$7.15) per kg for the year, representing a 40 percent increase compared with 2015. With these conditions, even rapidly rising production costs associated with feed and sea lice control have not prevented Norwegian salmon aquaculture companies from realizing record earnings.

The core EU markets for farmed Norwegian salmon, particularly Poland and France, have been largely willing to pay the steeply rising prices for product without significantly scaling back their purchase volumes. The continuing firmness of demand is reflected in the observation that a 36 percent increase in the unit value of Norwegian farmed salmon exports to the EU in 2016 occurred in parallel with only a 5 percent drop in total volume. However, EU buyers are finding themselves in increasing competition with US and Asian buyers to secure Norwegian fish. In Asia, Viet Nam stands out in posting a 152 percent increase in the volume of imports of fresh whole salmon from Norway in 2016,

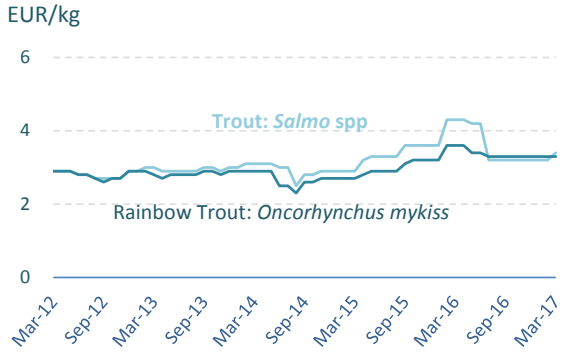
while many US importers have turned to Norway as an alternative source of fresh fillets after the Chilean sector suffered from negative media coverage on high antibiotic use as well as from the impact of the algal bloom.

In 2017, industry analysts expect Norwegian production volumes to return to slow growth, with Nordea markets predicting total harvest volumes of 1.17 million tonnes (whole fish equivalent) for the year, 1 percent higher than 2016. Along with the expected increase in supply from other sources, downward pressure on Norwegian prices could result. Other factors that could contribute to a decrease in prices include a strengthening Norwegian krone versus the euro and a delayed consumer reaction to pricey fish as processors increasingly pass on raw material costs. The forward price markets are reflecting these possibilities and have softened their expectations of 2017 prices somewhat, particularly towards the end of the year, although there is still little confidence in any sustained dips below the NKr60 (US$7.14) level.

Trout

As the salmon industry reaps the rewards of soaring prices, the farmed trout sector in Norway has not been left behind. Successful development of a diverse range of markets in Europe, Asia and North America in response to the Russian Federation trade embargo has seen demand for Norwegian trout grow rapidly. Due to this strong demand, biomasses have now been significantly depleted and 2016 price levels were some 41 percent above 2015. Belarus, Japan, Poland, the United States of America, Thailand and Ukraine are now all buying large and increasing volumes of Norwegian trout and the outlook for the sector is dependent only on the availability of fish to supply the booming demand.

Prices
Trout: Italy



Ex-farm price from Norway
Source: *European Price Report*

Chile

2016 ended with historic high prices for both Atlantic salmon and trout in Chile. Outstanding prices were also reported for coho salmon, although its main market, Japan, had a significant devaluation of its currency, which impacted prices negatively. The average annual salmon export price was US$7.38 per kg during 2016.

According to Subpesca, total salmonids harvests during 2016 reached 675 500 tonnes, a drop of 19.3 percent compared with 2015. Atlantic salmon amounted to 502 400 tonnes (-17.2 percent) while rainbow trout production was 71 400 tonnes (-26.9 percent). These declines are explained by the shift towards Atlantic salmon farming. In terms of coho, 101 800 tonnes were registered (-23.5 percent). The Central Bank of Chile indicated that despite the decline in production, the value of Chilean exports of all salmon species increased by 10 percent from US$3 510 million in 2015 to US$3 862 million in 2016.

Chilean salmon farmers have been working since October 2016 to prevent further mortalities from the algal bloom by increasing the number of monitoring stations to detect the phenomenon in the future. Meanwhile, rising salmon prices resulted in growing stock values for salmon companies on the Santiago Stock Exchange. Chile has also already harvested early in some areas (January–February) to avoid similar problems of the last season. Analysts do not expect serious production issues due to good weather in areas with high biomasses.

United Kingdom

Scottish salmon producers also benefitted from high prices in 2016 despite ongoing struggles with sea lice and Brexit. The implications of leaving the European Union (Member Organization) for the salmon sector are complex and as yet not fully clear. The weakening of the pound certainly boosted export revenues in the latter half of 2016, but the United Kingdom is also a major importer of salmon and thus importer purchasing power suffered. The production outlook is for steady but slow growth in Scottish salmon production over the coming years, so long as the extremely costly sea lice issues can be addressed effectively.

United Kingdom consumers are still showing strong interest in farmed salmon even at current extreme price levels, although there was a notable drop in imports during the later part of 2016. A recent Nielsen survey put total 2016 retail purchases of salmon in the United Kingdom at 58 000 tonnes worth £847 million, increases of 2.7 percent and 0.6 percent respectively. Canned salmon, for which raw material comes primarily from US wild fisheries, did not perform well,

and was down 10.9 percent for the year.

Wild salmon

After exceptionally high catches in 2015, Alaskan wild salmon fisheries saw a pronounced drop in volumes in 2016, both in comparison to the previous year and the last even year. The total volume for 2016 came to 298 000 tonnes, 44 percent lower than 2015 and 17 percent lower than 2014. This decline was not uniform across all species however, and good sockeye catches went some way towards offsetting low pink catches. The Russian Federation salmon fisheries were much more productive in 2016, coming in 32 percent higher than forecasted with landings of 437 200 tonnes of salmon, including 264 700 tonnes of pink salmon.

Norwegian exports of salmon (by product and destination)

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh fillets	USA	3.0	4.9	8.4	12.8	18.4
	France	19.6	20.0	18.2	21.1	14.4
	Japan	5.5	7.4	9.7	11.8	14.2
	Others	38.7	36.9	40.7	35.2	36.6
	Subtotal	**66.9**	**69.2**	**77.0**	**81.0**	**83.7**
Frozen fillets	Sweden	7.2	7.1	9.4	9.7	9.2
	USA	8.9	7.5	10.3	7.8	7.1
	Germany	4.7	3.8	2.3	2.7	4.0
	Others	26.0	26.0	25.9	25.8	25.0
	Subtotal	**46.7**	**44.4**	**47.9**	**46.0**	**45.3**
Fresh whole	Poland	105.0	113.1	118.6	129.8	130.7
	France	114.1	103.7	95.2	97.9	97.5
	Denmark	67.7	62.6	69.2	74.3	70.7
	Others	542.1	516.6	541.7	566.9	517.2
	Subtotal	**828.9**	**796.0**	**824.8**	**868.8**	**816.1**
Frozen whole	Belarus	0.6	0.6	1.0	2.0	5.2
	Ukraine	3.6	3.8	2.5	2.9	3.1
	Kazakhstan	3.4	3.4	3.4	4.0	2.6
	Others	42.8	37.0	37.4	25.8	23.2
	Subtotal	**50.4**	**44.7**	**44.3**	**34.7**	**34.2**
	Total	**992.9**	**954.4**	**993.9**	**1 030.6**	**979.3**

Source: *Norwegian Seafood Council*

(small shares of product type like salted not included)

UK exports of salmon (by product and destination)

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh	USA	31.8	38.6	42.3	32.1	26.1
	France	20.0	18.8	26.2	28.8	24.3
	China	6.1	9.5	13.4	11.4	8.4
	Others	27.6	31.7	27.8	18.8	21.5
	Subtotal	**85.5**	**98.6**	**109.8**	**91.2**	**80.3**
Frozen	Viet Nam	0.2	0.1	0.2	2.4	4.9
	France	1.5	1.6	1.8	4.8	3.5
	China	0.3	0.2	0.1	1.1	1.7
	Others	7.3	5.8	6.4	7.4	9.2
	Subtotal	**9.3**	**7.8**	**8.5**	**15.8**	**19.2**
	Total	**94.8**	**106.4**	**118.3**	**107.0**	**99.6**

Source: *Her Majesty's Revenue & Customs*

(small shares of product type like salted not included)

Chilean exports of salmon (by product and destination)

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh	USA	71.9	82.5	95.2	101.2	97.8
	Brazil	50.5	59.4	73.3	80.6	67.8
	China	0.0	0.7	3.4	6.7	13.5
	Others	7.4	9.4	11.6	12.6	11.9
	Subtotal	**129.9**	**152.1**	**183.6**	**201.1**	**191.0**
Frozen	Japan	114.4	93.2	97.7	113.0	83.0
	Russian Fed.	5.6	31.1	50.3	56.6	45.9
	USA	20.2	28.3	32.1	31.2	32.0
	Others	72.2	107.7	123.7	118.6	112.3
	Subtotal	**212.4**	**260.2**	**303.8**	**319.4**	**273.3**
	Total	**342.3**	**412.3**	**487.4**	**520.5**	**464.3**

Source: *Chile Customs*

(small shares of product type like salted not included)

Alaska wild salmon fisheries total landings in 2016

Species	Avg. weight (lbs)	Avg. price per lb (US$)	Number of fish (thousands)	Lbs. of fish (thousands)	Est. value (US$ thousands)
Chinook	10.7	4.4	401	4 276	18.829
Sockeye	5.4	0.9	52 861	286 159	251.435
Coho	7.2	1.2	3 800	27 461	33.157
Pink	4.1	0.2	39 389	160 231	37.773
Chum	7.3	0.6	16 189	118 384	65.185
Totals			**112 640**	**596 510**	**406 379**

Source: *Alaska Department of Fish and Game*

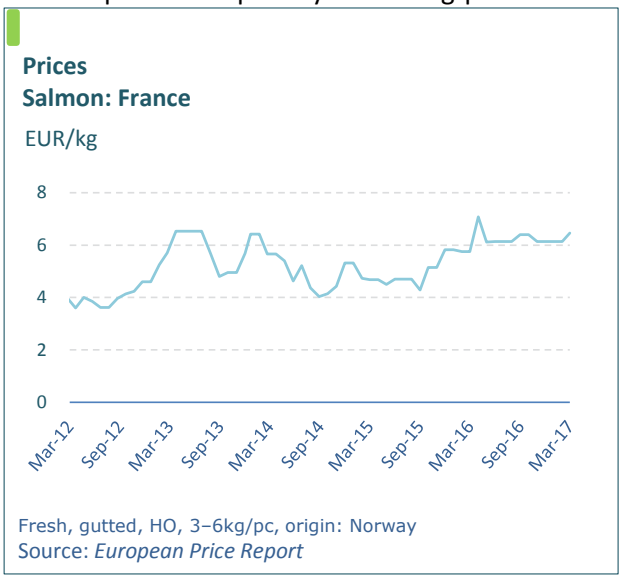
Markets

The global shortage of salmon has seen import volumes fall in almost all major markets, with only a few exceptions. One of these is the United States of America, where a strong dollar and positive economic conditions have put buyers in a good position to compete with the rest of the world for limited quantities of fish. The Russian Federation and Brazil, in contrast, are struggling with their own individual economic challenges which are making the high price of salmon difficult to swallow. The current price level is also driving industry participants globally to maximise efficiency at all points of the supply chain. One means of doing this is making the most use of whatever raw material is available, and there is growing industry investment in increasing yield at the processing level and developing value-added convenience products. Soaring raw material costs are also prompting operational and structural changes amongst processors, who are seeking to protect themselves against the dual impact of price volatility and delayed price transmission.

France

France is the largest European Union (Member Organization) market for salmon, and the consistent

growth of French demand has been an important factor behind the meteoric rise of European salmon producer revenues, particularly in Norway, its number one supplier. After a temporary backlash against Norwegian origin salmon due to negative consumer perception, Norway has recovered its lost share of the French market and the Norwegian share of French salmon import volumes has actually increased each year for the last three years. Consumer resistance to rising prices is not unlimited, however, and the expectation is for a shift towards alternative seafood items such as cod as raw material costs continue to filter down to the retail level. Importers have responded in part by increasing purchases of relatively cheaper frozen fillets from Chile in place of fresh fillets from Norway.



Germany

Germany is another major market where demand for salmon has shown resilient growth over the last few years. Both fresh and smoked salmon are popular products in Germany, although the latter makes up the major proportion of German imports, sourced almost entirely from neighbouring Poland where a large smoking industry imports raw material from Norway. The total value of German imports of salmon has almost doubled since 2012, and in the case of fresh products has more than doubled. Large volumes of fresh salmon in Germany are sold through discount retail chains.

United States of America

According to the National Oceanic and Atmospheric Administration (NOAA), the United States of America consumed an estimated 353 000 tonnes of salmonids in 2016 worth a total of US$3 211 million. These figures represent an increase of 2.5 percent in volume and 18 percent in value compared with 2015. Three countries account for 76 percent of the total volume imported. Chile was the leading supplier (131 300 tonnes worth US$1 349 million), followed by Canada (99 500 tonnes worth US$768 million) and Norway (38 200 tonnes worth US$412 million). Chile was the only one of these three countries that registered a decrease in terms of volume (-1.5 percent), while Canada grew by 9 percent and Norway by 3 percent.

Japan

Japan imports significant volumes of three different species of salmon: coho, sockeye and Atlantic. Coho and Atlantic salmon are supplied from farms in Chile and Norway respectively, while sockeye comes from Russian Federation and US wild fisheries. Japanese demand for seafood is waning in the long-term and there has been no consistent salmon market growth trends over recent years, with year to year fluctuations in salmon import volumes largely dependent on the relative strength of the yen and

French imports of salmon (by product)

	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Fresh whole	111.0	108.9	102.8	106.7	113.9
Fresh fillets	19.3	19.5	17.9	19.6	15.5
Frozen fillets	19.2	22.7	23.2	20.4	21.4
Smoked	9.3	8.7	7.8	8.5	8.0
Others	16.8	8.4	7.1	8.1	8.0
Total	**175.6**	**168.3**	**158.7**	**163.3**	**166.7**

Source: *DNSCE*
(small shares of product type like salted not included)

German imports of salmon (by product)

	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Fresh whole	43.1	47.5	64.1	62.1	58.6
Fresh fillets	7.3	8.8	11.6	14.4	14.7
Frozen fillets	26.7	32.9	36.8	29.6	34.3
Smoked	34.5	39.1	38.6	41.8	46.5
Others	17.1	25.3	26.4	22.1	25.7
Total	**128.7**	**153.6**	**177.5**	**169.9**	**179.8**

Source: *Germany Customs*
(small shares of product type like salted not included)

Japanese imports of salmon (by product and destination)

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh	Norway	31.9	27.1	28.0	31.1	31.3
	Canada	1.0	1.3	0.6	0.8	1.9
	Australia	1.2	0.8	0.4	1.0	0.8
	Others	1.4	1.4	1.3	1.0	1.2
	Subtotal	**35.4**	**30.5**	**30.4**	**33.9**	**35.1**
Frozen	Chile	120.7	103.9	92.7	106.0	101.0
	Russian Fed.	25.0	34.7	28.7	32.5	31.7
	USA	10.6	5.7	8.7	22.0	15.4
	Others	8.0	8.1	7.2	5.6	4.4
	Subtotal	**164.3**	**152.4**	**137.3**	**166.2**	**152.4**
	Total	**199.7**	**182.9**	**167.8**	**200.1**	**187.6**

Source: *Japan Customs*
(small shares of product type like salted not included)

US imports of salmon (by product and destination)

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh fillets	Chile	67.5	80.8	92.4	97.3	95.4
	Norway	3.7	5.9	10.7	17.2	20.3
	Canada	4.9	6.3	3.7	6.3	9.5
	Others	10.8	11.8	14.3	11.7	11.7
	Subtotal	**86.9**	**104.8**	**121.1**	**132.5**	**137.0**
Frozen fillets	China	30.4	33.3	37.9	32.8	32.7
	Chile	20.6	27.8	29.7	29.9	27.4
	Norway	8.5	7.8	10.0	9.0	7.8
	Others	3.5	3.9	4.3	4.1	4.4
	Subtotal	**63.0**	**72.9**	**82.0**	**75.7**	**72.4**
Fresh whole	Canada	85.4	67.8	56.0	79.6	83.3
	Faroe Islands	6.8	10.1	11.7	10.1	11.0
	Norway	1.8	4.5	5.9	11.1	9.4
	Others	11.1	12.1	17.5	12.7	12.8
	Subtotal	**105.1**	**94.5**	**91.1**	**113.5**	**116.5**
Frozen whole	Canada	1.9	1.5	1.7	2.4	3.8
	Chile	0.6	1.4	2.3	1.6	3.1
	China	0.1	0.0	0.1	1.0	2.8
	Others	2.0	4.4	1.8	1.8	2.4
	Subtotal	**4.6**	**7.3**	**6.0**	**6.9**	**12.1**
Smoked	Netherlands	1.7	1.9	2.3	2.2	1.7
	Greece	0.0	0.0	0.0	0.6	1.2
	Chile	2.5	2.2	1.4	1.4	1.0
	Others	1.0	1.2	1.7	1.5	1.4
	Subtotal	**5.2**	**5.3**	**5.3**	**5.7**	**5.3**
	Total	**264.6**	**284.8**	**305.5**	**334.3**	**343.2**

Source: *NMFS*

(small shares of product type like salted not included)

the availability of supply. Compared with 2015, 2016 import volumes across all three species were generally flat or marginally down, with Atlantic salmon the only species showing a significant price increase.

Outlook

After a year of record-breaking prices in 2016, early 2017 has been marked by a steep decline in global farmed salmon prices from the peaks reached in December. This is partly due to a relatively greater availability of fish but is also the result of a seasonal drop in demand, which is exacerbated by the continuing absence of a major early year buyer, the Russian Federation. However, prices in both the US and European Union (Member Organization) markets are still at or above last year's levels, and despite a softening of forward prices, the outlook remains strong.

There is now widespread acceptance of the firmness of the new price plateau supported by rapid global demand growth and a number of physical and regulatory constraints on supply growth. All of these factors have created a strong motivation for stakeholders to seek ways of maximizing their share of the enormous revenues being generated on relatively little raw material. Secondary producing countries such as the Russian Federation, Canada, Ireland, Iceland and Australia have all invested in developing new aquaculture production sites, while the large-scale viability of land-based farming is increasingly a question of "when" rather than "if". There is also a strong focus on developing technologies for efficiency gains at both the farm and processing level, while product developers are scrambling to find new ways of adding value while reducing raw material requirements.

SMALL PELAGICS

GLOBEFISH HIGHLIGHTS

Total landings expected to grow by 7 percent in 2017

Global landings of small pelagics are expected to grow by 7 percent in 2017 compared with 2016. The major reason for this growth is an expected higher catch of Peruvian anchovy. Atlantic mackerel and Atlantic herring are also expected to increase, although not as much as anchovy.

The combined increase for herring and mackerel landings in 2017 is expected to be about 4 percent more than in 2016. This could put some pressure on prices, but since the increase is relatively modest, no dramatic price changes are expected. Instead, currency exchange rates may place a greater role on price formulation.

El Niño, which for the past three years has affected the Peruvian anchovy fishery negatively, is now over. According to an analyst at a Peruvian fishing company during a presentation at the NASF in March, stocks are recovering quickly.

Mackerel

The Scottish Fisheries Minister has decided to withhold 12 percent of the country's 2017 mackerel quota pending an analysis of how much mackerel is landed in Scotland. According to the Minister, a significant part of the Scottish catch is landed in other countries, and he wants to change this. Although the Norwegians are calling this action "protectionistic", they are well familiar with the problem, as they also want adequate amounts of raw mackerel material for their shore-based industry. Norwegian authorities are pressing for Norwegian vessels to land their catch in Norway, but they also want other nations to land in Norway to provide raw material for the on-shore processing industry.

East Asia is emerging as the major market for frozen mackerel. China, Japan and Republic of Korea together traded 595 000 tonnes of frozen mackerel in 2016. The species traded in Asia include both cheap Pacific mackerel and the more expensive European (Atlantic) mackerel. By value, the three Asian countries together imported as much as 54.3 percent of Norwegian mackerel in 2016. Other important markets for frozen Norwegian mackerel were the Netherlands (11.1 percent of total), Nigeria (4.2 percent) and Turkey (3 percent).

In Peru, the Ministry of Production set the horse mackerel quota for 2017 at 100 000 tonnes, which is an increase of 7.5 percent compared with 2016. At the same time, Chile has increased its horse mackerel quota by 1 percent to 300 000 tonnes. While in Peru most of the horse mackerel caught goes for direct human consumption, in Chile, the horse mackerel is filleted and frozen, with large amounts of cut-offs processed into fishmeal.

New Zealand annually catches about 36 000 to 50 000 tonnes of horse mackerel, and most of this (about half) ends up in the Japanese market. The main fishing period runs from December to January, and then again in June. Japanese consumers prefer the larger sizes, and in 2017, prices have increased by about 15 percent compared with last year, mainly due to tighter supplies.

Herring

There is a continuing dispute over pelagic quotas set by the Faroe Islands. The Faroe Islands have set their own quota for NVG (Norwegian spring-spawning) herring at 125 597 tonnes, which constitutes 19.4 percent of the total quota for this species. At the same time, the Faroe Islands have set their quota for blue whiting at 476 902 tonnes. Norwegian fisheries associations are protesting and saying that this unilateral action by the Faroe Islands does not contribute to long-term sustainable management of these resources.

In the beginning of January, the Norwegian herring fishery was well under way, and during the first week alone, landings amounted to 17 300 tonnes. Large catches have continued with the Directorate of Fisheries warning that there is a danger of nets bursting due to the large amounts of fish.

Good catches of herring, though with a significant amount of small fish, have put pressure on prices at

the beginning of the year. The Norwegian minimum price for herring has been reduced several times already. On 22 February, the minimum prices were reduced to between NKr4.18 for Group 5 (125 g and less per piece) and NKr6.28 for Group 1 (350 g and more per piece).

Capelin

Norwegian capelin fishers were reporting strong but varying catches off of Iceland in the beginning of the year. Prices to fishers were high, between NKr6.80–7.49 per kg. This is considerably more than what was paid last year, when first-hand prices varied between NKr3.00–4.00. According to fishers, the capelin is of good size and quality.

The total capelin quota in Icelandic waters was recently increased by 57 000 tonnes to 299 000 tonnes. Iceland's quota is 196 000 tonnes, up from 100 000 in 2016, while the Norwegian quota is 40 000 tonnes in these waters. In the Barents Sea, there is no capelin quota this year.

Anchovy/sardines

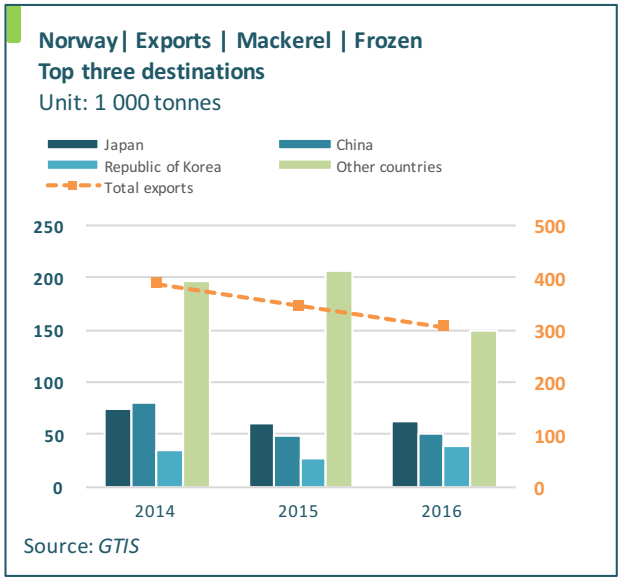
The outlook for the South American anchovy fishery is positive for 2017. Landings are expected to increase significantly, despite reports of the stocks being in less than great shape.

Peru closed the second anchovy season of 2016 in January. At that time, the landed catch amounted to 1.73 million tonnes of a total quota of 2 million tonnes. The fishery was closed early due to the fact that the stock was showing signs of entering the reproductive phase. By the end of 2016, Peru had caught 68 percent of the anchovy quota. A total of 1.36 million tonnes had been landed in the country's north central region.

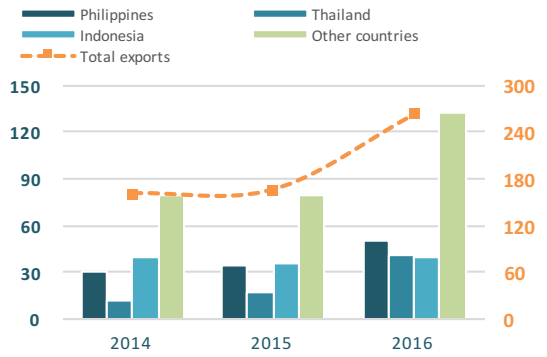
Trade

In 2016, Norwegian exports of small pelagics amounted to 674 000 tonnes worth NKr7.8 billion (US$950 million). This represents a decline of 15 percent by volume compared with 2015, but an increase of 11 percent by value. The increases in value were caused by high prices for both herring and mackerel, while at the same time the quotas were low and demand was strong in Norway's main markets.

Norwegian mackerel exports amounted to 309 400 tonnes worth NKr4.1 billion FOB Norwegian border. This represents a 12.2 percent decline by volume and a 6.6 percent increase by value. For herring, Norwegian exports amounted to 224 300 tonnes worth NKr3.0 billion, a 4 percent increase by volume and a 25.7 percent increase by value compared with 2015.

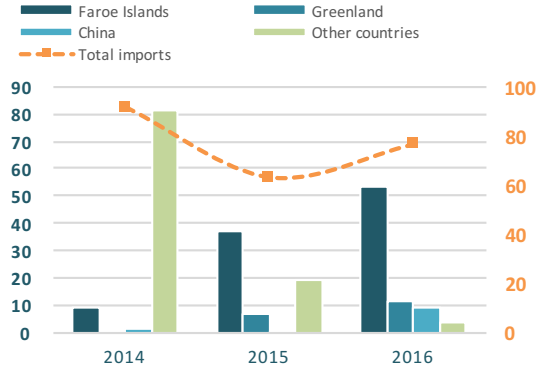


China | Exports | Mackerel | Whole frozen
Top three destinations
Unit: 1 000 tonnes



Source: *China Customs*

Russian Fed. | Imports | Mackerel | Frozen
Top three origins
Unit: 1 000 tonnes



Source: *GTIS*

Norwegian exports of small pelagics (by product and destination)

		2012	2013	2014	2015	2016
				(1 000 tonnes)		
Frozen mackerel	Japan	48.2	53.0	73.7	60.5	63.0
	China	48.0	52.3	80.8	49.0	51.3
	Rpublic of Korea	13.1	16.9	35.3	27.7	38.8
	Others	153.9	121.1	196.5	207.1	149.7
	Subtotal	**263.2**	**243.2**	**386.4**	**344.4**	**302.7**
Frozen herring	Ukraine	58.3	33.8	35.2	25.2	34.8
	Lithuania	26.1	35.8	25.9	15.9	15.7
	Egypt	15.3	10.9	3.4	12.5	12.1
	Others	105.4	121.5	73.1	43.8	38.5
	Subtotal	**205.1**	**202.0**	**137.5**	**97.5**	**101.2**
	Total	**468.3**	**445.2**	**523.9**	**441.9**	**404.0**

Source: *Statistics Norway*

China's exports of mackerel increased by a massive 57.9 percent in 2016 to total 262 400 tonnes. By value, the increase was also high, up by 55.6 percent, to US$462.1 million. The main market was the Philippines, which accounted for 19 percent of the total, followed by Thailand (15.5 percent) and Indonesia (15.2 percent).

Russian Federation frozen mackerel imports grew by 21.9 percent in 2016, to 76 800 tonnes. Previously, Norway was the main supplier, but since the embargo was introduced, no mackerel has been imported from Norway. The main suppliers in 2016 were the Faroe Islands (69.5 percent of the total), followed by Greenland (14.5 percent) and China (11.5 percent).

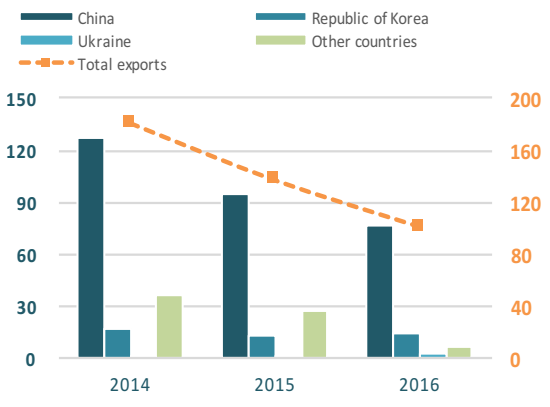
The Netherlands saw only a marginal increase in its exports of frozen herring last year, from 157 700 tonnes in 2015 to 159 400 tonnes in 2016 (+1.1 percent). The major markets included Nigeria (40.8 percent of total), Egypt (26.2 percent) and Malta (14.7 percent). Dutch export prices dropped slightly, resulting in Dutch herring export values falling by 3.3 percent in 2016 to US$131.9 million.

In contrast, Norway, experienced growth in both volume and value of its frozen herring exports. The exported volume increased by a meagre 0.4 percent, to 101 200 tonnes, while the value of herring exports increased by 10.6 percent to US$115.7 million. Main markets for Norwegian herring include Ukraine (34.4 percent of total), Lithuania (15.5 percent) and Egypt (12 percent).

Norway has managed to find alternative markets for its herring in place of the Russian Federation. Iceland, on the other hand, still needs to find and develop new markets.

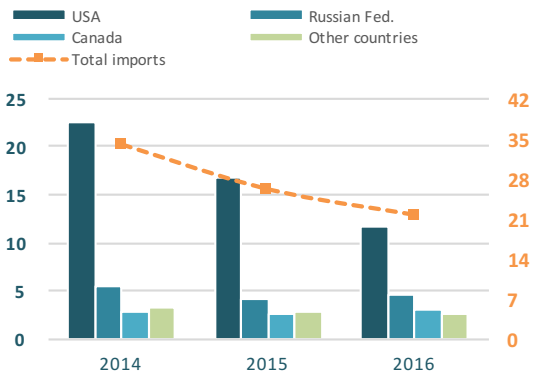
Russian Federation frozen herring exports dropped significantly during 2016, from 136 900 tonnes in 2015 to 100 600 tonnes in 2016 (-26.5 percent). The main markets were China (76.4 percent of total), Republic of Korea (14.3 percent) and Ukraine (2.8 percent).

Russian Fed. | Exports | Herring | Frozen
Top three destinations
Unit: 1 000 tonnes



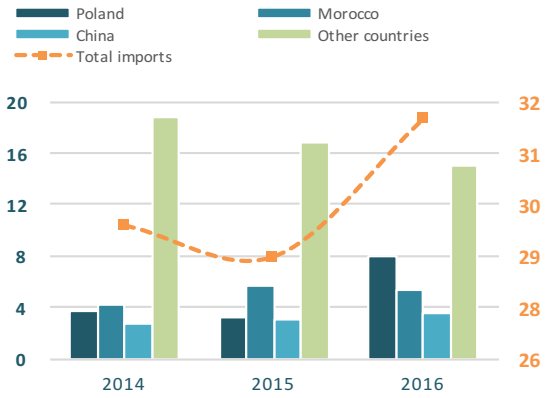
Source: *GTIS*

Japan | Imports | Herring | Fresh and frozen
Top three origins
Unit: 1 000 tonnes



Source: *Japan Customs*

USA | Imports | Sardines | Canned
Top three origins
Unit: 1 000 tonnes



Source: *NMFS*

Japan imported 17.1 percent less fresh and frozen herring in 2016 (21 800 tonnes) than in 2015 (26 300 tonnes). Major suppliers to Japan were the United States of America (54.1 percent of total), the Russian Federation (21.1 percent) and Canada (13.3 percent).

In terms of sardines, trade in the US market is going fine, although prices have been falling. The volume of US imports of canned sardines in 2016 increased by 11.1 percent compared with 2015, to total 32 000 tonnes. Its value of US$118.6 million represented a decrease of 3.2 percent.

Outlook

With total landings of small pelagics expected to increase by 7 percent in 2017 over 2016, one might expect some pressure on prices. However, most of this increase will come from growth in landings of South American anchovies, which does not go to the human food market. Herring and mackerel landings will rise by some 4 percent, but while prices for herring are already under pressure due to a strong start of the season, mackerel prices may be expected to stay level or increase.

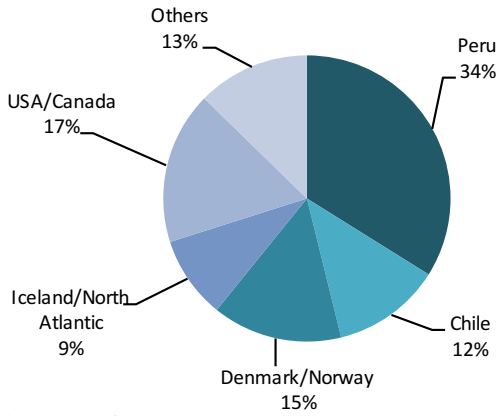
FISHMEAL & FISH OIL

GLOBEFISH HIGHLIGHTS

Production low in 2016, 2017 forecast looks positive

Globally, there was an overall decline of fishmeal production in 2016. For Peru, the most significant fishmeal producer, 2016 was a wild ride, with a number of up and downs for the anchovy industry. Now El Niño is coming to an end, and with no forseeable factors putting the upcoming fishing season at risk, the market is anticipating a rebound. However, with demand ever growing, it would not be surprising to see demand topping supply, leading to a price rise in the long term.

Fishmeal production by countries* (2015)



Source: ***FAO***

*IFFO countries only, North Atlantic includes UK, Ireland and the Faroe Islands

Production

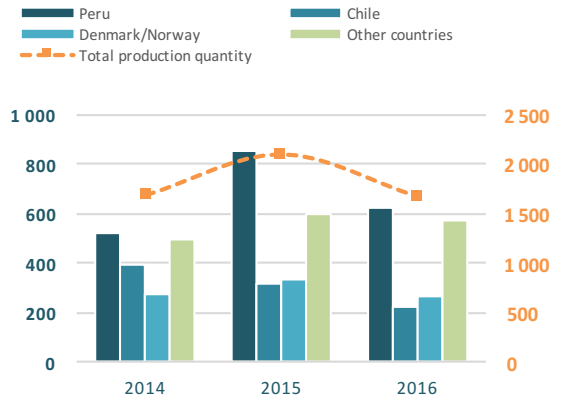
In terms of actual fishmeal production in 2016, there was a clear decline globally, with large-scale producers all reporting low production. Peru registered merely 623 300 tonnes, a 27.4 percent drop compared with the total production quantity in 2015, Chile 225 500 tonnes (-30 percent) and Denmark/Norway 269 000 tonnes (-20 percent). With respect to fish oil, slight growth (+3 percent) was seen in Peru with total production quantity amounting to 102 500 tonnes. The United States of America and Canada reported strong growth in fish oil production due to strong landings of menhaden.

With the end of El Niño and a promising outlook for Peruvian anchovy landings in 2017, a positive year is expected for the global fishmeal and fish oil market.

2016 was an unpredictable year for the anchovy industry in Peru. The Instituto Del Mar Del Peru (IMARPE) delayed the first fishing season due to an additional biomass survey they were conducting. They then announced a higher-than-expected TAC quota (1.8 million tonnes),, which somewhat eased the pressure on the market. However, the delay of the season coupled with the start of anchovy breeding season, which interrupted fishing activities, resulted in only half of the quota being caught for the first fishing season of 2016.

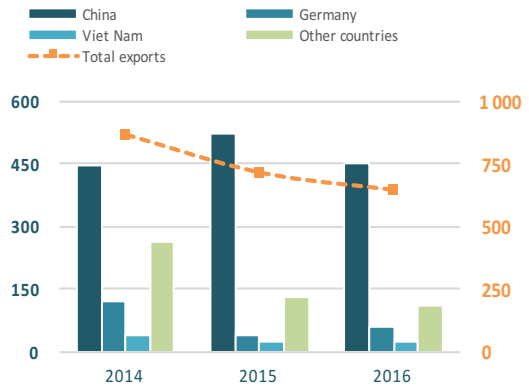
On November 2016, the second fishing season in Peru started with a TAC amounting to 2 million tonnes. Analysts widely predicted this development would revitalize international fish feed supply. However, the percentage of juvenile fish in the catch was too high and thus the government ordered several closures, even before the TAC was reached. As a result, large-scale producers in the market were under short supply of raw materials and had to presell their future contracts for a low price in order to maintain their balance sheet performance, driving the average FOB Peruvian fishmeal prices to a rock-bottom level. By the end of 2016, Peru reached only 68 percent of their second season TAC, with landings totaling 1.36 million tonnes.

Top global producers of fishmeal
Unit: 1 000 tonnes



Source: *IFFO,* refers only to IFFO member countries

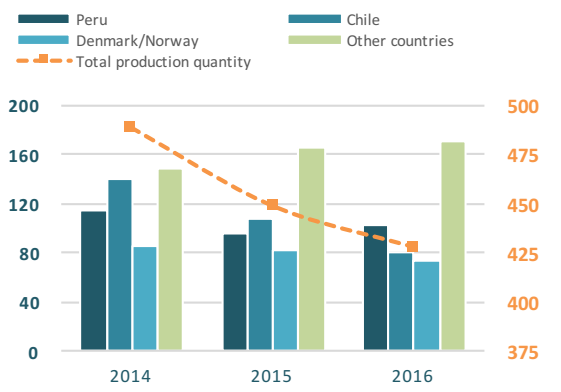
Peru | Exports | Fishmeal
Top three destinations
Unit: 1 000 tonnes



Source: *Produce*

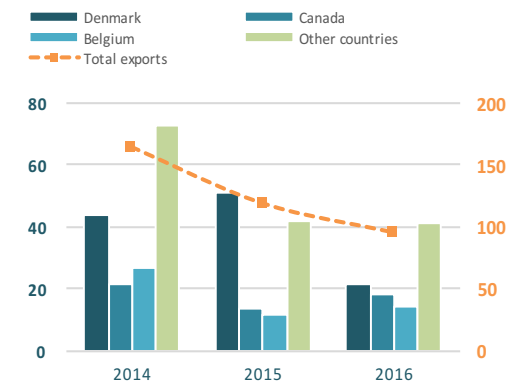
percent, 19 percent, and 15 percent respectively.

Top global producers of fish oil
Unit: 1 000 tonnes



Source: *IFFO,* refers only to IFFO member countries

Peru | Exports | Fish oil
Top three destinaions
Unit: 1 000 tonnes



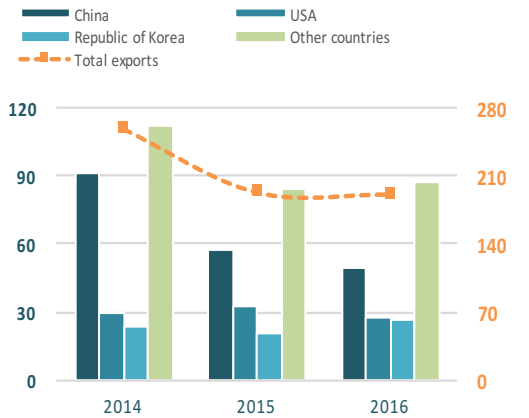
Source: *Peru Customs*

Exports

The poor landings of raw materials definitely translated to bleak performance in 2016 trade. This continues the declining trade trend, with exports of fishmeal in both Peru and Chile weakening each year over the past three years. 2016 actually reported the lowest quantities in both two countries since 2011. Comparing 2016 with 2015, Peru decreased exports of fishmeal by 10 percent to 643 800 tonnes and Chile slightly dropped to 191 600 tonnes. Analysts ascribed this record low export quantity to the disruptive production pattern in Peru. With such low export volumes, the United States of America caught up quickly in terms of fishmeal trade. In 2016, 154 100 tonnes of fishmeal from the United States of America were produced with 40 percent destined for China.

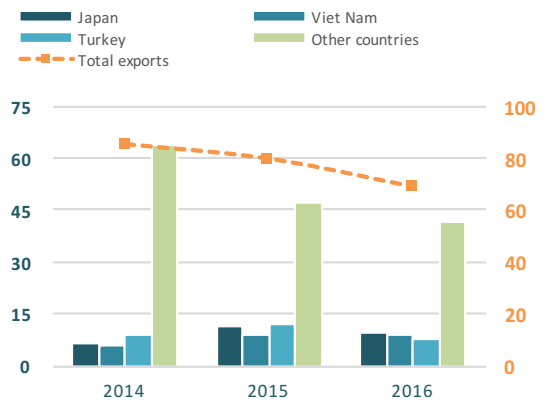
For fish oil, 2016 was also a tough year with Peru's export quantity lower than 100 000 tonnes for the first time since 1999. Denmark, Canada and Belgium took most of the Peruvian fish oil exports, namely, 22

Chile | Exports | Fishmeal
Top three destinations
Unit: 1 000 tonnes



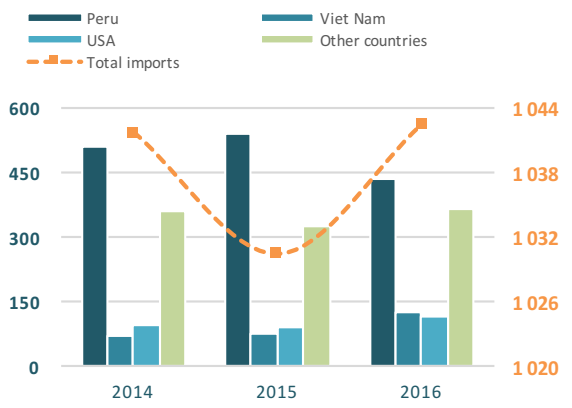
Source: *Boletín de Exportaciones del IFOP*

Chile | Exports | Fish oil
Top three destinations
Unit: 1 000 tonnes



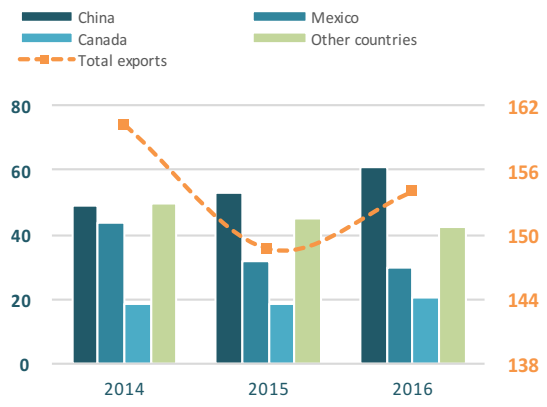
Source: *Boletín de Exportaciones del IFOP*

China | Imports | Fishmeal
Top three origins
Unit: 1 000 tonnes



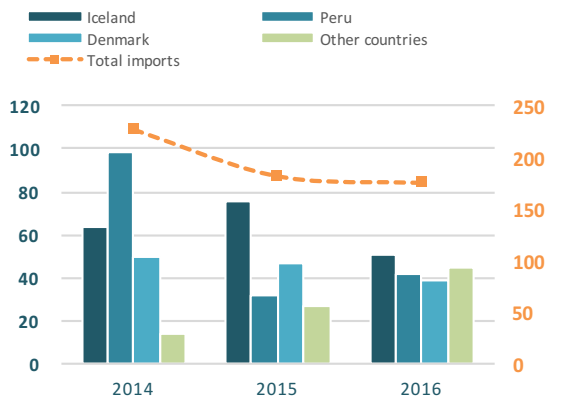
Source: *China Customs*

USA | Exports | Fishmeal
Top three destinations
Unit: 1 000 tonnes



Source: *NMFS*

Norway | Imports | Fishmeal
Top three origins
Unit: 1 000 tonnes



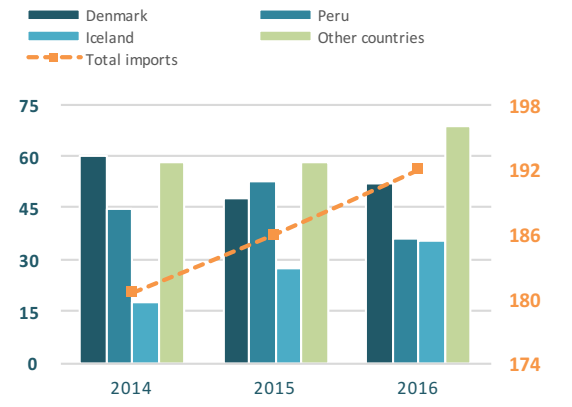
Source: *Statistics Norway*

Markets

In the last decade, China has become the principal importer of fishmeal from both Peru and Chile as the country faces tremendous demand from the aquaculture and terrestrial farming sector. In 2016, China absorbed 70 percent of the total fishmeal exports from Peru and 30 percent from Chile. Of note is the fact that though China maintained absorbing a high proportion of Peru's fishmeal output, the actual volume was the lowest since 2011. This new trend is likely due to the fact that Chinese demand has been filled by more diversified sources, particularly from Viet Nam, Ecuador and South Africa. These newer exporting countries have also allowed for the Chinese fishmeal import quantity to reach a record high over the past five years.

Norway imported a record high volume of fish oil, with more than 190 000 tonnes imported from all over the world. Denmark, Peru, Iceland and the United States of America are the main suppliers. Denmark and Iceland are becoming increasingly significant to Norwegian fish oil imports.

Norway | Imports | Fish oil
Top three origins
Unit: 1 000 tonnes



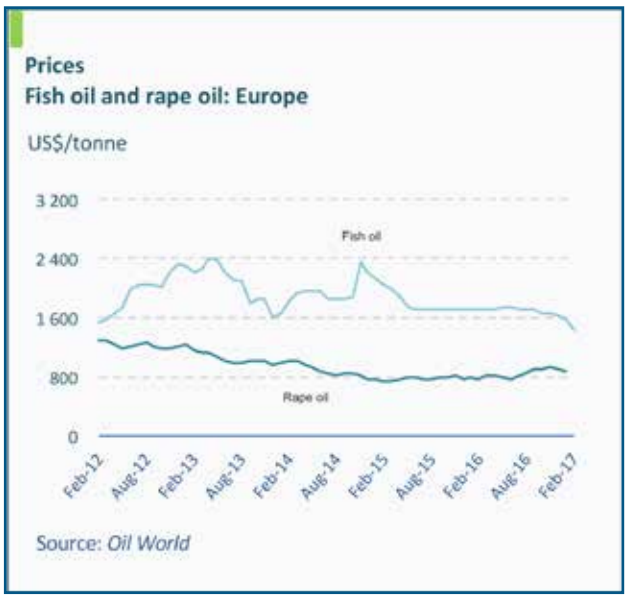
Source: *Statistics Norway*

Prices

The monthly average FOB Peruvian fishmeal prices peaked in mid-2016, when market anxiety due to the delayed season and an unknown TAC volume pushed prices up.

However, once the fishing season began, some important producers had to pre-sell their contract at low prices in order to save on their margins, contributing to a price plunge, mainly from June to September 2016. From September on, the price has been trending upwards, with the likely demand and supply gap as the fundamental factor. Indeed, the first fishing season TAC of 1.8 million tonnes was only fulfilled by half, surely driving prices up once again.

So far for 2017, prices of fishmeal are trending downwards, though the positive outlook for the first fishing season in 2017 may lift the market supply and thus result in a price correction.



Outlook

By the end of January 2017, the second fishing season in the central-north region in Peru had ended with 98 percent of the quota fulfilled, which means that 30 percent of this quota were taken in just one month. This is a very encouraging sign and surprised many in the industry as most market players did not expect the quota to be even close to met. At the same time, the Peruvian Government initiated the season for the southern area with a TAC of 515 000 tonnes, an increase of 35 percent compared with last year.

With *El Niño* now over and an expected strong reproduction of anchovy stocks, some in the industry are expecting landings of anchovies between 2–2.5 million tonnes in 2017 for the first season. Consequently, the first fishing season in 2017 is predicted to be positive and strengthen South America's position as the leading fishmeal and fish oil producer.

The global shrimp aquaculture sector as well as the Norwegian farmed salmon sector is expected to expand in 2017, leading to further demand for fish feed. However, recently the quota for the first fishing season in the center-north area in Peru was set at 2.8 million tonnes, indicating a 55.6 percent year-on-year increase. In the short-term, the price may be depressed by this positive news, but in the long-term, it remains to be seen whether prices will level off or trend down if anchovy stock levels become more normalized in post *El Niño*.

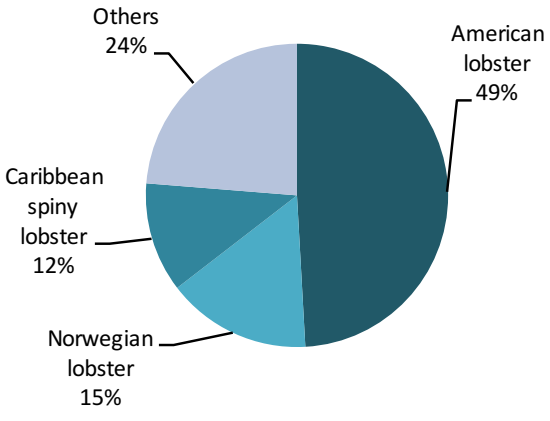
LOBSTER

GLOBEFISH HIGHLIGHTS

Growing demand in China with prices on the rise

In 2016, there was strong growth in demand for lobster in China, and major producers increased shipments to this country, with rising prices. So far for 2017, the strong demand from Chinese New Year in January also pushed prices up.

Lobster production (2015)



Source: ***FAO***

Supplies

North American lobster supplies are expected to decline in 2017. After having had continuous growth since 2007, a 6 percent decline was registered in 2016, and this is expected to fall further this year. In 2015, total lobster landings in North America amounted to 152 200 tonnes, of which 86 200 tonnes were landed in Canada. Though official figures are not yet available for 2016, it is estimated that landings amounted to just 143 000 tonnes (-6 percent), of which 76 000 tonnes (-12 percent) were landed in Canada.

In the United States of America, the lobster resource off the southern New England region is under pressure. New fishing restrictions aimed at restoring the declining resource could be introduced as early as May.

In December 2016, it was reported that New Brunswick lobster landings were looking good after the season opened in early November. Fishers noted that landings were up by as much as 10 percent, with high prices to the fishers reported.

In contrast, bad weather of Nova Scotia and New England kept lobster fishers ashore for long periods in December 2016. This led to a shortage of lobster, which in turn pushed prices up significantly. In addition to good demand in North America for the Christmas and year-end season, there was very strong demand in China as mentioned above.

South Africa's west coast rock lobster is threatened by illegal, unreported and unregulated (IUU) fishing, overfishing and inadequate fisheries management measures. Various organizations, including the WWF and the South African Deep-Sea Trawling Industry Association are now calling for a temporary stop, or at least a major reduction, in the fishery. Experts say a full closure of the fishery is unlikely, but a reduction in the fishing effort is required.

International trade

Global lobster imports increased only slightly in 2016 compared with 2015, totalling 162 300 tonnes (+0.8 percent compared with 2015). The largest importers were the United States of America (51 200 tonnes), the EU (33 400 tonnes), Canada (31 300 tonnes) and China (19 700 tonnes). The United States of America registered a slight decline in import volumes (-6 percent), while China continued its trend of growing

imports, with a rise of 23.9 percent.

Demand in the EU appears to be stable. In 2016, lobster imports into the EU increased marginally by 1.5 percent, to 33 400 tonnes.

The demand for lobster in China is strong, and Canada is shipping more to China than in previous years. One exporter chartered a Boeing 747 to fly lobsters directly from Halifax to China in order to meet the significant demand during Chinese New Year. Product shipped to China consists mainly of live lobster, which fetches a premium price.

Canada's lobster exports declined very slightly (-1.6 percent) to 73 100 tonnes. The main markets for Canada were the United States of America, accounting for over 59.4 percent of the total, followed by China (11.2 percent of total) and the Republic of Korea (4.2 percent).

US exports of lobster, on the other hand, increased by 7.4 percent to 55 500 tonnes. Main markets for the United States of America were Canada (58 percent of total), China (9.7 percent of total) and Italy (6.7 percent of total). As much as 93 percent of US lobster exports were fresh or live lobsters.

Republic of Korean lobster imports from North America set a new record with 4 500 tonnes being imported last year. Total import value reached US$94 million, an increase of 13.7 percent compared with 2015. Canada accounted for 63.7 percent of the imports, while the United States of America accounted for 35.9 percent.

Top three importers of lobster (by product and destination)

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh /live	Canada	30.5	28.3	31.1	30.1	31.3
	USA	23.2	25.4	28.6	32.0	27.7
	China	8.9	12.5	16.3	15.9	19.7
	Others	33.7	33.3	33.6	31.0	32.1
	Subtotal	**96.4**	**99.4**	**109.5**	**109.0**	**110.7**
Frozen	USA	24.5	24.9	24.6	25.1	23.6
	France	3.7	3.7	3.6	3.8	4.0
	Japan	2.8	3.0	2.9	2.8	3.0
	Others	17.1	18.3	18.7	20.4	21.0
	Subtotal	**48.3**	**49.8**	**49.9**	**52.1**	**51.5**
	Total	**144.6**	**149.3**	**159.4**	**161.0**	**162.3**

Source: *GTIS*

(small shares of product type like processed not included)

US imports of lobster (by product and origin)

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh /live	Canada	23.0	25.0	28.3	32.0	27.6
	Portugal	0.0	0.0	0.0	0.0	0.0
	Trinidad and To	0.0	0.0	0.0	0.0	0.0
	Others	0.2	0.4	0.2	0.0	0.1
	Subtotal	**23.2**	**25.4**	**28.6**	**32.0**	**27.7**
Frozen	Canada	15.3	15.3	16.2	16.2	15.7
	China	0.6	0.8	0.9	0.7	2.0
	Honduras	1.7	1.4	1.3	1.6	1.4
	Others	29.2	29.9	32.2	32.7	33.0
	Subtotal	**24.5**	**24.9**	**24.6**	**25.1**	**23.6**
	Total	**47.8**	**50.3**	**53.2**	**57.0**	**51.2**

Source: *GTIS*

(small shares of product type like processed not included)

EU imports of lobster (by product)

	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Fresh/live	17.2	17.2	17.7	16.4	16.3
Frozen	13.3	13.8	13.9	13.8	14.5
Others	2.5	2.0	2.3	2.7	2.6
Total	**33.0**	**33.0**	**33.9**	**32.9**	**33.4**

Source: *GTIS*

Chinese imports of lobster (by product)

	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Fresh/live	2.0	3.8	8.5	9.5	12.6
Frozen	1.4	1.1	1.1	2.2	2.4
Others	6.9	8.7	7.8	6.3	7.1
Total	**10.3**	**13.5**	**17.4**	**18.1**	**22.0**

Source: *GTIS*

Canadian exports of lobster (by product and destination)

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh /live	USA	23.0	25.0	28.4	31.9	27.6
	China	2.1	2.2	3.8	5.9	6.8
	Republic of Korea	0.7	0.9	1.3	1.9	2.1
	Others	5.0	5.6	6.3	7.9	7.8
	Subtotal	**30.8**	**33.7**	**39.8**	**47.6**	**44.3**
Frozen	USA	15.3	15.3	16.2	16.2	15.8
	Japan	0.8	1.0	1.5	1.6	1.8
	Spain	0.3	0.5	0.7	1.0	1.4
	Others	4.2	4.2	7.8	7.9	9.9
	Subtotal	**20.7**	**21.0**	**26.3**	**26.7**	**28.9**
	Total	**51.5**	**54.7**	**66.1**	**74.3**	**73.1**

Source: *GTIS*

(small shares of product type like processed not included)

US exports of lobster (by product)

	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Fresh/live	45.5	43.6	49.0	46.9	51.5
Frozen	2.6	4.8	4.9	4.4	3.6
Others	0.6	0.8	0.5	0.4	0.4
Total	**48.7**	**49.2**	**54.4**	**51.7**	**55.5**

Source: *GTIS*

Prices

New Zealand rock lobster is enjoying tremendous popularity in China. Chinese imports of this product have increased dramatically over the past decade, and so has the price. In 2001, China accounted for 70 percent of New Zealand's lobster exports. In 2016, the country took nearly all lobster exports (99 percent). FOB prices have increased by 285 percent from 2004–2016 in US dollar terms. The main driving force behind this development is the growing buying power of the Chinese middle class.

Strong demand for lobster meat has pushed prices

up recently and widened the gap between prices for lobster meat and tails. Whereas prices for lobster tails have been practically flat since late 2014, prices for lobster meat have skyrocketed since mid-2015. Prices for lobster tails in the United States of America have been relatively flat for a long time, while for whole lobster, prices have been rising over the past two to three years. Whole lobster prices are seasonal, while lobster tails do not seem to be subject to seasonal variations.

Lobster prices in Europe are clearly seasonal, with a peak at or just after Christmas (January–February), while prices during the summer months are low.

Though lobster prices overall rose in 2016 and remained high in early 2017, prices will drop in April and May as the Prince Edward Island fishery gets under way.

Outlook

Lobster demand is on the rise, especially in China. However, international trade has declined slightly as a result of the supply situation, and this has pushed prices upwards. However, there is a clear demand trend of moving from frozen to live product. It is assumed that this has something to do with improved transportation or packaging, including "resting stations" on long hauls, which were introduced some years ago. Clearly, consumers prefer live lobster, and this is particularly true in Asia, where holding tanks for live lobster (and fish) are very common in all sorts of restaurants. This trend is likely to continue. The supply outlook for 2017 is not great, as North American landings are expected to decline somewhat.

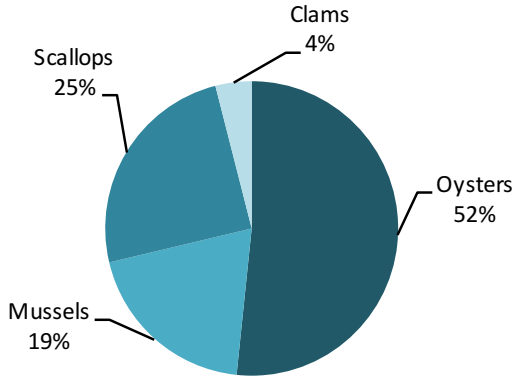
BIVALVES

GLOBEFISH HIGHLIGHTS

Less bivalves in world trade in 2016

World trade of bivalves contracted in 2016 for various reasons. Some factors include: the El Niño phenomena in Peru, which resulted in declining scallop exports, as well as red tide events in Chile that curtailed mussel production. In contrast, the outlook for 2017 is positive. Production is expected to be higher and with strong demand, prices are likely to stay high in the coming months.

Bivalve production by selected species, both wild and farmed (2015)



Source: ***FAO***

Mussels

So far for 2017, there has been excellent demand for mussels, with increasing prices at the world level. There has been strong production in the Wadden Sea, which will keep the Northern European market well supplied. Chile is strongly promoting its product in the US market, and is likely to expand its production and exports in 2017. About 200 000 tonnes of mussels are traded internationally every year, with Chile and Spain as the main exporters of this species, accounting for over half of total trade.

The production of mussels from Chile fell by 2.3 percent in 2016, totalling 276.900 tonnes, which represents around 30 percent of the total aquaculture production in Chile for the year. All mussels come from the region of Los Lagos, whose capital is the city of Puerto Montt. The decline in mussel production was expected to be even stronger, when a red tide hit the Puerto Montt area in the beginning of 2016 and a month long strike impacted production in May. Despite these challenges, production recovered strongly in the second part of 2016. The Chilean mussel sector aims at promoting the outstanding quality of Chilean mussels and coming from pristine waters under the 'Patagonian mussel' brand.

In line with this decline in production, Chilean exports in 2016 were reduced to 67 400 tonnes, down from 69 700 tonnes in 2015. Spain, the United States of America and France were the main importers. The average unit value of exported mussels from Chile declined by 10 percent in 2015 to US$2.60 per kg, reflecting the strengthening of the US dollar. Not surprisingly, the import price in Spain was the highest at US$ 3.30 per kg, as the Spanish canning industry is demanding premium quality mussels.

Spanish producers, who used to mainly sell to the local canning industry, have now been promoting their products on the live mussel market in France and in Spain due to the challenges of competing with Chilean mussels. Market promotion of high-value Spanish products in the French market has been very successful. Meanwhile, production of certified mussels in the Galician sea is growing with Spanish canners now promoting Galician mussels in the Spanish market, highlighting the higher quality of a local product over an imported product. In 2016, Spain imported some 11 900 tonnes of frozen mussels from Chile, far less than the 14 400 tonnes imported in 2013. Spain also experienced a loss

in export markets in 2016, likely due to positive developments in the domestic market, shipping only 50 000 tonnes, 15 percent less than in 2015.

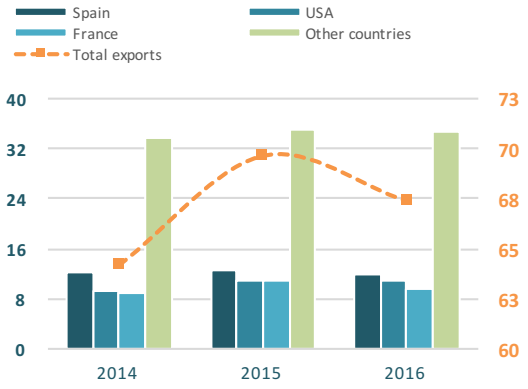
France is the world's top importer of mussels. The French consumer prefers local products, but in several months of the year the local product is not harvested and local demand must be satisfied by imports. In 2016, imports reached 59 300 tonnes, a 5 percent increase over 2015. Spain and the Netherlands are the main suppliers to the French market, accounting for more than half of French exports.

World imports/exports of mussels

		2012	2013	2014	2015	2016
				(1 000 tonnes)		
Imports	France	54.7	52.2	53.5	56.6	59.3
	Italy	41.5	42.2	44.1	52.3	38.2
	USA	34.3	32.2	33.9	32.3	35.9
	Others	158.8	158.2	155.6	144.2	151.3
	Total	**289.2**	**284.8**	**287.2**	**285.4**	**284.7**
Exports	Chile	61.0	64.9	64.2	69.7	67.4
	Netherlands	44.9	47.2	53.8	60.9	54.5
	Spain	47.9	47.6	50.2	58.7	49.7
	Others	148.3	141.1	142.3	140.2	163.1
	Total	**302.2**	**300.9**	**310.5**	**329.4**	**334.6**

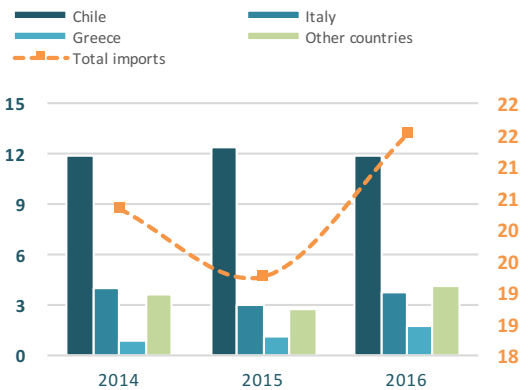
Source: *GTIS*

Chile | Exports | Mussels
Top three destinations
Unit: 1 000 tonnes



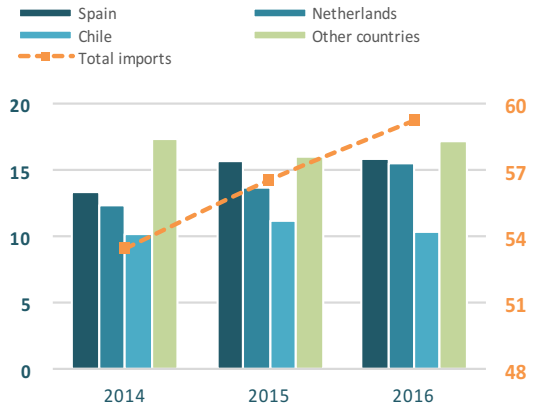
Source: *GTIS*

Spain | Imports | Mussels
Top three origins
Unit: 1 000 tonnes



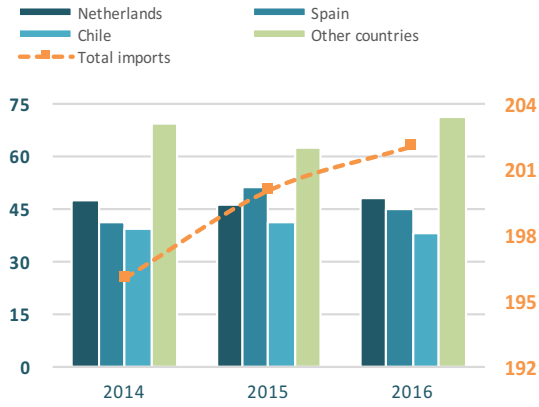
Source: *Agencia Tributaria*

France | Imports | Mussels
Top three origins
Unit: 1 000 tonnes



Source: *DNSCE*

EU | Imports | Mussels
Top three origins
Unit: 1 000 tonnes



Source: *Eurostat*

Oysters

Chilean production of oysters in the north totalled 3 300 tonnes in 2016, a 16.2 percent year-on-year increase. This rise was largely due to the recovery from the earthquakes on production in 2015. Compared with mussels, oysters are still only a minor player in total Chilean bivalve production.

In France, oyster production recovered in 2016 after a number of difficult years characterized by high mortality. France even managed to export some 1 500 tones of its production, mainly to China. It is interesting to note that China, with millions of tonnes of domestic oyster production, still imports French oysters to it market, likely due to their high-quality and positive image among well-off Chinese consumers. French oysters sell at the highest priced bracket, with an average unit value of US$10 per kg in the Chinese market.

World imports/exports of oysters

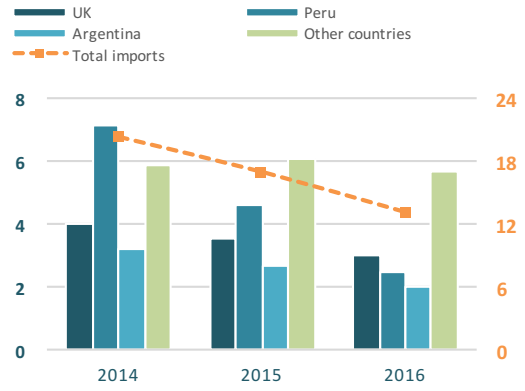
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Imports	USA	9.0	9.8	10.2	11.8	12.0
	France	4.5	5.4	6.3	6.4	7.8
	Malaysia	0.3	0.7	1.0	1.2	6.9
	Others	37.3	38.0	38.9	44.1	38.1
	Total	**51.1**	**53.9**	**56.3**	**63.5**	**64.8**
Exports	France	7.5	8.1	8.5	10.6	10.6
	China	9.6	8.9	8.6	9.3	9.9
	Republic of Korea	7.3	9.9	9.3	12.7	8.0
	Others	24.5	25.0	26.9	24.8	29.1
	Total	**49.0**	**51.9**	**53.3**	**57.3**	**57.6**

Source: *GTIS*

Scallops

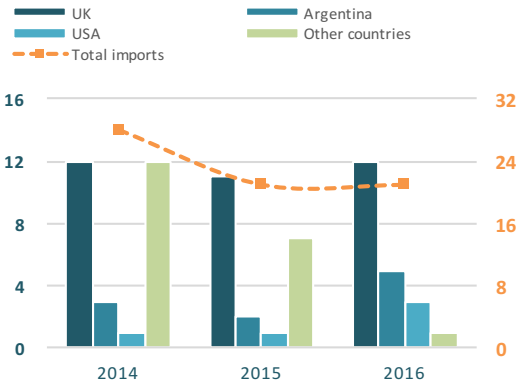
China is the world's major producer of scallops, producing around 1.6 million tonnes annually with all of the production consumed domestically. Scallops are also a highly appreciated food item in southern Europe and in North America, where most of the consumption is also domestically supplied. France is a bit of an exception, importing a moderate amount of scallops. However, imports of scallops into France have declined in recent years, from over 20 000 tonnes in 2012–2014 to only 13 200 tonnes in 2016. The main suppliers of scallops to the French market are Peru and the United Kingdom. The 2016 El Niño impacted scallop production in Peru. Exports of scallops to the French market had been 7 200 tonnes in 2014 but were reduced to 4 700 tonnes in 2015 and 2 500 tonnes in 2016. As the El Niño is now over, Peruvian production should return to normal and exports to the French market should also expand in 2017.

France | Imports | Scallops
Top three origins
Unit: 1 000 tonnes



Source: *DNSCE*

EU | Imports | Scallops
Top three origins
Unit: 1 000 tonnes



Source: *Eurostat*

World imports/exports of scallops

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Imports	China	13.7	24.2	29.7	56.4	47.1
	USA	15.6	27.6	27.5	22.4	23.2
	France	20.1	21.8	20.3	17.0	13.2
	Others	89.5	92.5	82.1	78.9	75.9
	Total	**138.9**	**166.1**	**159.6**	**174.7**	**159.3**
Exports	China	27.1	31.2	38.0	35.2	34.6
	UK	14.4	12.0	11.1	11.8	12.5
	USA	14.8	12.4	12.0	10.2	10.6
	Others	58.5	65.0	63.3	57.0	49.1
	Total	**114.9**	**120.6**	**124.4**	**114.2**	**106.8**

Source: *GTIS*

Clams

Asia is the main import market for clams, with the Republic of Korea and Japan as the top markets. Japan imported some 51 000 tonnes of live and fresh clams in 2016, a 4 percent increase over 2015. The main supplier was China, taking a 75 percent market share. The second major supplier is the Republic of Korea, which comprises about 25 percent of the market. The latter experienced some growth in shipments of clams to the Japanese market in 2016. The Republic of Korea is also a major importer of clams, though in 2016, the country reduced its imports by 13 percent (53 900 tonnes). China is practically the only supplier of fresh clams into the Republic of Korean market.

World imports/exports of clams, cockles and ark shells

		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Imports	Japan	70.0	72.4	65.8	74.8	80.4
	Republic of Korea	67.6	61.4	73.0	70.4	63.6
	Spain	11.4	25.5	31.0	31.7	33.3
	Others	74.0	86.2	84.5	79.6	85.0
	Total	**223.0**	**245.6**	**254.2**	**256.6**	**262.3**
Exports	China	144.7	144.9	154.9	157.2	156.0
	Republic of Korea	14.5	11.5	11.7	11.8	16.0
	Canada	9.3	8.7	9.1	9.4	11.0
	Others	56.8	62.5	68.7	66.9	65.4
	Total	**225.3**	**227.6**	**244.4**	**245.3**	**248.4**

Source: *GTIS*

Outlook

The demand for bivalves is expanding in all consuming countries. The image of bivalves as an environmentally friendly species and its well-known health benefits are creating an positive market atmosphere for bivalves. Also driving demand is the fact that consumers trust the sanitary security of the product and the overall value chain transparency. Prices are likely to increase in 2017, despite higher production reaching the export market.

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CRAB

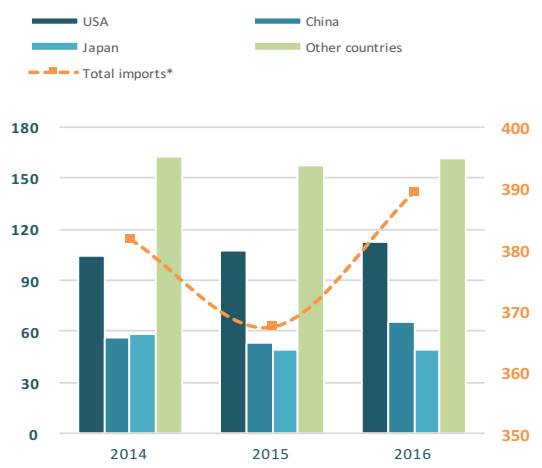
GLOBEFISH HIGHLIGHTS

Supplies of king and snow crab could decline in 2017

There is a mixed supply picture for 2017, with uncertainties about king crab and snow crab. With lower domoic acid levels on the US West Coast, the outlook for dungeness crab supplies is optimistic.

Supplies

Top three global importers of crab
Unit: 1 000 tonnes



Source: *GTIS*
**estimates*

Supplies of snow crab from Alaska and Canada are expected to drop in 2017. Newfoundland landings specifically are expected to drop from 41 700 tonnes in 2016 to about 35 000 tonnes in 2017, while Alaska's landings are expected to decline from 18 400 tonnes in 2016 to just 9 800 tonnes in 2017.

Meanwhile, landings of red king crab are expected to increase in 2017, as quotas in the Barents Sea and the Pacific have been increased. At the same time, the Russian Federation has increased their quota for red king crab by 25 percent to over 25 000 tonnes and the opilio crab quota by 16 percent to just over 25 000 tonnes.

On the US West Coast, the domoic acid scare in the Oregon crab industry is easing somewhat after authorities recently approved lifting a crab harvesting closure. After just 30 days into the season, Oregon reported landings of 6 000 tonnes, compared to only 6 450 tonnes for the entire 2016 season.

In terms of prices, king crab and snow crab prices are high, resulting in the possibility of South American red crab becoming an alternative. This Argentinean crab is smaller than the king or the snow crab, but with a similar taste. However, the supplies of this crab are limited. In 2016, only about 2 000 tonnes were exported.

International trade

World trade in crabs increased by 8 percent in 2016 compared with 2015, to total 323 000 tonnes with an import value of US$3 603 million. The largest importers were the United States of America (31 percent of total), followed by China (16.6 percent) and Japan (12.1 percent).

Japan increased its crab imports by 3 percent in 2016 compared with 2015 for a total of 36 500 tonnes. The value increased slightly more by 5 percent to US$582.5 million. The main supplier by far was the Russian Federation, which accounted for about half of all Japanese crab imports. Other major suppliers included Canada, the United States of America and Norway.

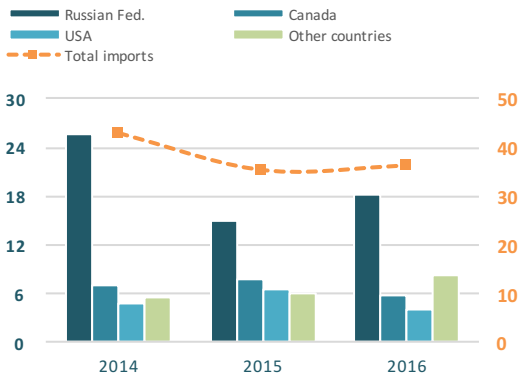
Japanese imports of frozen snow crab from the United States of America were down, but this reduction was more than offset by increased shipments from Europe and the Russian Federation. Frozen king crab from the United States of America declined by 39 percent to just 900 tonnes, while imports of Russian Federation king crab increased

by 23 percent to 3 900 tonnes. Imports from other European Union (Member Organization) countries (Spain, Latvia, Lithuania and Norway) also increased significantly.

US imports of crab in 2016 increased by 7.2 percent to 78 800 tonnes. The import price also increased, with the total value of US crab imports growing by 17.5 percent to US$1 034 million. The main suppliers were Canada, the Russian Federation and Norway.

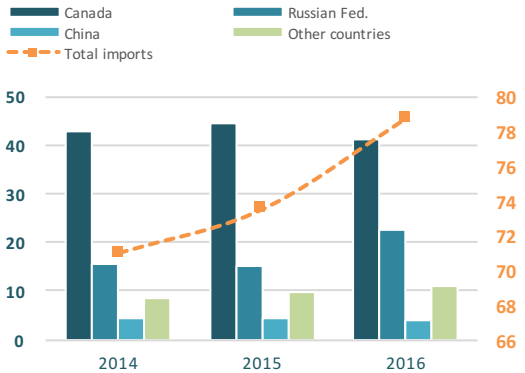
Russian Federation crab exports declined by 9.2 percent in 2016. The main market, the Republic of Korea, bought less Russian Federation crab, as did Japan, while Taiwan Province of China imported more crab from this source.

Japan | Imports | Crab
Top three origins
Unit: 1 000 tonnes



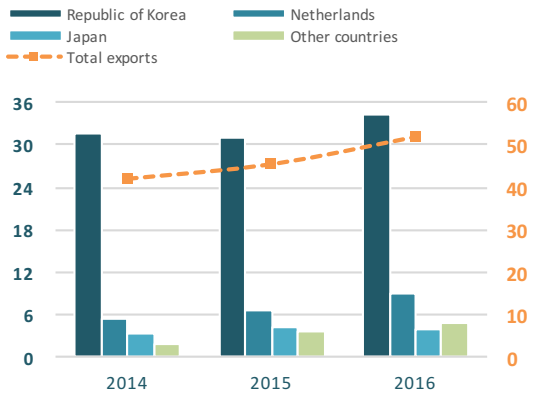
Source: *Japan Ministry of Finance*

USA | Imports | Crab
Top three origins
Unit: 1 000 tonnes



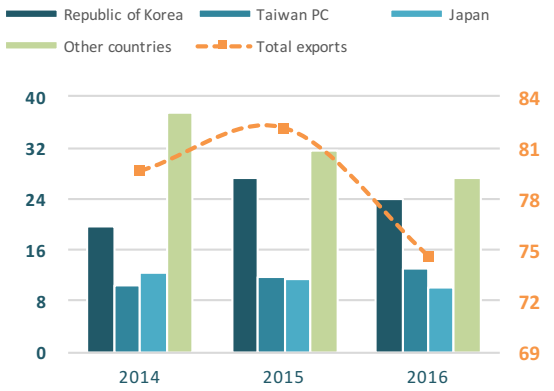
Source: *U.S. Department of Commerce, Bureau of Census*

Russia Fed. | Exports | Crab
Top three destinations
Unit: 1 000 tonnes



Source: *Federal Customs Service of Russia*

China | Exports | Crab
Top three destinations
Unit: 1 000 tonnes



Source: *China Customs*

Chinese exports of crab took a small dive in 2016, as total exports fell from 82 200 tonnes in 2015 to 74 600 tonnes in 2016 (-9.2 percent). Exports to major markets such as the Republic of Korea, Japan and Hong Kong SAR declined, while exports to the second largest market for Chinese crab, Taiwan Province of China, increased by 10 percent.

Prices

A series of supply shortages have pushed snow crab prices to record high levels. However, the outlook for 2017 is for increased global landings, and consequently, snow crab prices should recede. This drop in prices will start once the Canadian Gulf season opens in the spring with Canadian landings expected to increase in 2017. Supplies of snow crab in the United States of America are also expected to inch upwards, while domestic landings and snow crab supplies in Japan have been on a sliding trend

since 2014.

Red king crab prices on the US West Coast are also approaching record levels, mainly due to tighter

supplies.

Outlook

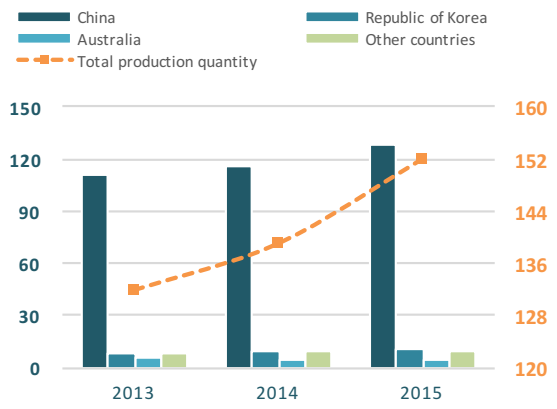
The outlook for 2017 is that supplies will improve for king crab and snow crab. The availability of dungeness crab may also improve if the domoic acid levels on the US West Coast stay low. Consequently, the present high prices are set to come down in the course of the year.

ABALONE

GLOBEFISH HIGHLIGHTS

Production continues to grow, coupled with continuing demand; prices high and stable

Top three global producers of abalone
Unit: 1 000 tonnes

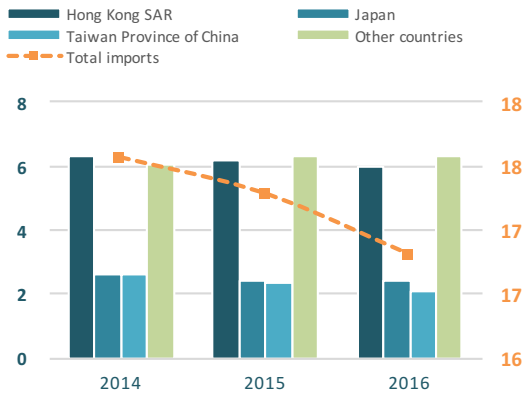


Source: *FAO*

2016 global production of abalone figures are not yet available, however it is forecasted that production will be slightly lower than in 2015, when it grew by 11 percent compared with 2014 (over 150 000 tonnes), bolstered by another record year for Chinese production. In the latter months of 2016, robust demand resulted in record high prices for premium size and whole live/fresh species as high as US$80 per kg.

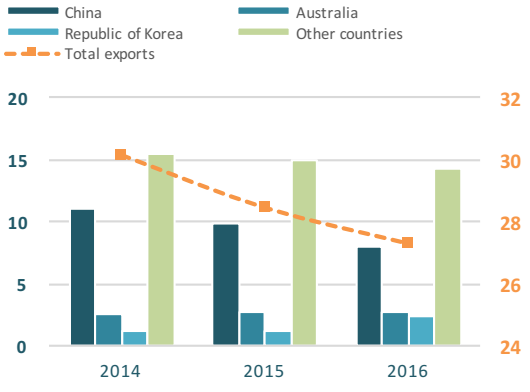
Abalone is one of the most expensive of any seafood worldwide. Production has shifted from wild caught to farmed, and today over 95% of abalone comes from aquaculture. China is easily the leading producer of farmed abalone in the world, producing over 127 000 tonnes in 2015, and remains the foremost consuming country. The Republic of Korea is the second largest worldwide producer, producing over 10 000 tonnes in 2015. In terms of wild-caught, Australia is the third largest producer and has the world's largest remaining capture abalone fishery, landing nearly 4 500 tonnes in 2015. In terms of trade, for 2016, China, Australia and the Republic of Korea were the leading exporters while Hong Kong SAR, Japan and Singapore were the leading importers, in that order.

Top three global importers of abalone
Unit: 1 000 tonnes



Source: *GTIS*

Top three global exporters of abalone
Unit: 1 000 tonnes



Source: *GTIS*

Source: *Tokyo Metropolitan Central Wholesale Market Daily Report,*
Price indicated is shell-off

For more of a background on abalone, please see the first GLOBEFISH Highlight's Abalone section in the October 2016 Issue.

Asia

China

China consumes 90 percent of all the abalone it produces, with current domestic prices averaging about US$26 per kg. Export prices for larger sizes and premium species were over US$40 per kg. The seemingly insatiable domestic demand continues, with exports decreasing by more than 18 percent in 2016 compared with 2015, in order to fulfill Chinese consumption.

Republic of Korea

Domestic demand for abalone is somewhat sluggish, but has been more than offset by the growth in export volumes, which have increased by over 100 percent in 2016 compared with 2015, sparked by Chinese demand for seed and juvenile abalone. As a result, export prices are stronger than domestic. Future internal demand as well as export volumes will strengthen with the development of more premium processed products.

Japan

In 2016, Japan became the world's second largest abalone importer. Among the most discerning abalone devotees, Japan's wholesale Tsukiji fish market is considered a trendsetter for abalone demand and prices. Over the past two years, abalone prices have been higher than compared with the last five year averages. Peak wholesale prices in the fall of 2016 soared as high JPY9 300 per kg (US$80). This contrasts with a five year average high of roughly JPY7 500 per kg (US$66).

The Pacific

Australia

The rising export prices of abalone in Australia were largely caused by two factors: the strengthening of the Australian dollar compared with the Japanese yen and the growing demand from Japan, China, and other Asian countries. During the later part of 2016, Australian wild abalone was priced at A$85 per kg FOB (US$65 per kg). As a point of reference, this is more than double the price of the world's next highest priced fresh whole fish or shellfish.

New Zealand

Export quantities were down roughly 6 percent in 2016 compared with 2015. Some abalone fisheries were closed in zones affected by the Kaikoura magnitude 7.8 earthquake in November.

Africa

South Africa

Exports and prices of the South African premium abalone continued to be strong throughout 2016. Concern over IUU fishing of abalone remains. South Africa's Department of Agriculture, Forestry and Fisheries (DAFF) estimates the annual IUU trade at close to R440 million (US$33 million), meaning that IUU trade is roughly 50 percent of South Africa's total abalone export value.

An unprecedented naturally occurring algae bloom (red tide) occurred in early January 2017 and covered over nearly 500 km of coastline, negatively affecting South Africa's major abalone producers. This will have some downward effect on export quantities in 2017.

North, South, Central America

Mexico

Overall Mexican production of abalone in 2016 was 30 percent less than in 2015, which totaled a little over 600 tonnes. This reduction has lead to significant loss of income for grower cooperatives, which have thousands of members in the Baja California peninsula. Environmental issues caused by IUU fishing is blamed. The state and federal government have been organizing meetings with producers and scientists to work on a plan to recover the resource. With abalone farming still in its infancy in Mexico, there is significant room to develop the sector.

Chile

In Chile, abalone aquaculture production is now a maturing industry, demonstrating steady production and export levels. 2016 exports grew by nearly 3 percent to total over 670 tonnes. World prices should encourage further abalone farming expansion.

United States of America

For 2015, the United States of America produced around 340 tonnes of abalone, which is in line with 2014 volumes. A strong Japanese market resulted in increased export price levels for both California and Hawaiian farmers.

Outlook

Remarkably, world demand has kept pace with the astounding 500 percent increase in farmed abalone production over the last 10 years (24 400 tonnes in 2006 to over 150 000 tonnes in 2015). A possible consequence of this explosive growth could mean greater price fluctuations in the world marketplace.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The role of Recreational Fisheries in the sustainable management of marine resources

Introduction

Recreational fishing (RF) is defined as the "fishing of aquatic animals (mainly fish) that doesn't constitute the individual's primary resource to meet basic nutrition needs and are not generally sold or otherwise traded on export, domestic or black markets."[1] RF operate within a competitive sphere among commercial fisheries, which may harvest from the same stock. RF can provide diverse revenues and opportunities; with a widely promoted catch and release policy within this sector, RF allows for a multiplication of value per fish actually harvested.

Providing global estimates of participation in RF is difficult due to limited data available, particularly in less developed countries. Rough estimates of the global number of recreational fishers (from here on referred to as anglers) vary widely, from a minimum of 220 million to a maximum of 700 million, with this higher estimate almost twice the number of commercial fishers[2]. Regardless of the actual numbers, participation in RF is recognized to be increasing on a global scale, particularly in developing nations in accordance with the expansion of the middle class. Many wild freshwater fish stocks and some coastal marine stocks are exclusively used by RF in more industrialized nations, through a recognition of the high value per harvest that this fishery sector can provide when appropriately managed.

Mismanagement of RF can cause several conservation issues, including: high stock exploitation, selective harvest of 'trophy fish' (and therefore shifts in population structure), habitat destruction, unwanted catch and release mortality/disease, introduction of non-native species and disturbance of the environment. With these concerns, it is therefore necessary to orient the RF sector towards environmental sustainability on an international level[3], through various means such as the licensing of anglers and boats, establishing closed seasons and developing size and bag limits. Using these means and others, RF has already been taken into account in fisheries management in many developed countries. Though important, RF inclusion in management can generate conflicts in terms of resource allocation among various stakeholders, especially commercial fishers.

Involving RF in fishery management can perhaps be more complicated in developing countries, as these nations are heavily dependent on fishing for economic-development, employment and food security. Thus, critics view RF as an unjust exploitation of resources that is not directly contributing to either. To make matters further complicated, it is tourists who mainly participate in RF, especially in developing countries, meaning that anglers are not well represented in the local population making the benefits of RF even less clear.

However, despite the challenges related with RF, it is important to emphasize that recognizing the significant number of anglers worldwide and their typical affinity for the environment, RF can be a powerful tool for both sustainable management of resources and for economic development. This article seeks to explore these points further.

1 **World Bank. 2016.** Fishing for poverty. (Available at http://sailorsforthesea.org/programs/ocean-watch/fishing-poverty). Accessed 23 March 2016.

2 **World Bank. 2012.** The Hidden harvest, the global contribution of capture fisheries. Washington, DC, World Bank

3 Following this purpose FAO created the first global Guidelines on responsible recreational fisheries. The Guidelines support sustainable RF by translating the relevant provision of the FAO Code of Conduct for Responsible Fisheries into specific advice for sustainable RF.

Many RF are involved in the conservation, preservation and rehabilitation of aquatic habitats. This involvement seems natural as anglers often pursue RF due to their enjoyment of the natural environment, escape from the routine, sense of freedom and other diverse values.

RF can actively support important research through citizen science initiatives and fisheries management. In countries with public fishing rights, revenue from the sale of angling licenses has supported conservation projects, while in countries with private fishing rights, angling clubs and associations are partially responsible by law to manage fish population and habitats.

In addition, it is also important to consider that RF is usually constituted by self-financed and self-organized lobbies that are powerful enough to achieve conservation and rehabilitation goals, with little or no government support. However, it must be clear that these types of lobbies are working towards efforts that are truly for the environment and take into consideration impacts on commercial fishers, who fish for their livelihood and food/ nutrition security.

The role of RF in sustainable management of resources and on economic development

RF has the potential to significantly stimulate economic development. As fish caught from RF are typically not part of a direct market transaction, the economic contribution of RF requires alternative approaches in order to find its value. For instance, the RF sector supports various economic activities related to fishing, such as travel, accommodation, boat rental, motor construction or repair, bait and tackle supply, infrastructure, restaurants, etc. The World Bank has estimated that anglers spend approximately US$190 billion annually related to recreational fishing, contributing about USD$70 billion per year to global gross domestic product[4]. These are probably low estimates, not including the large revenue streams for fishing tackle.

In some developing countries, RF is directly linked with the development of the tourism sector, with recognition of the value these fisheries can create through tourist angler visits. In Costa Rica, foreign anglers were estimated to generate US$279 million in new capital and roughly 63 000 jobs in 2008. In Panama, anglers contribute an estimated US$48.4 million to annual GDP and support about 9 500 jobs.

As RF develops and expands in line with tourism, the tourism sector must address environmental and socio-cultural consequences of RF. Unfortunately, coastal reefs, lagoons, mangroves and other areas have already been destroyed in many developing countries due to resort construction, excessive visitation, pollution and other interferences. Such environmental degradation has negative consequences for nations trying to benefit from the exceptionally high-value global tourist angler market. Local communities must be taken into consideration as well as large-scale tourism too often does not directly involve communities, viewing them simply as a labor force without offering any real opportunity for community economic growth. Furthermore, cultural changes can be brought in by tourists and unaccepted by locals, who often feel their community and culture is being negatively impacted by tourism.

4 **World Bank. 2012.** Recreational Fishing for poverty alleviation and conservation [brochure]. Washington DC.

Efforts made to reduce the negative impact from tourism have led to a new trend called 'eco-tourism'.

Ecotourism can be defined as responsible travel to natural areas that conserves the environment and improves the well-being of local people. Models aligned with ecotourism should follow principles such as environmental conservation, community participation, preservation and promotion of local heritage. Cooperation between eco-tourism and RF has the potential to provide vital support to the economy of small fishing villages, especially as these communities tend to be over-dependent on fish as a single source of income and nutrition. Diversification schemes through alternative revenues such as eco-tourism is needed to improve local livelihoods while addressing the often declining profitability and employment within the fishery sector.

One important cooperative action between small-scale fisheries and tourism is called fish-tourism (*pescaturismo*), which was originally developed in Italy in response to the decrease in fish stock and significant fisher unemployment. Fish-tourism provides tourists with the opportunity to go out to sea with professional fishers using their own vessels and do activities such as boat excursions, lessons on fishing methods and gear, participate in game fishing, prepare meals on board and learn about the marine environment and fishing heritage of the local community. After the initial success of fish-tourism, the involved fishers decided to broaden its scope for tourists to be able to spend a day or more in the house of a fisher, renting a room and participating in the every day life of the fisher family.


© FAO/Paolo De Donno

The main purposes of pescatourism are:

- Preserving fish stock and the marine environment
- Maintaining stable employment and new revenues
- Involving women and youth
- Enhancing the social and professional role of fishers
- Promoting the consumption of local food
- Increasing public awareness on coastal biodiversity protection and management.

In the Mediterranean, fish-tourism is considered a positive strategy to address the short-term losses related to the establishment of Marine Protected Areas (MPAs) and to provide an alternative source of income.

Another RF activity related to tourism is fish tournaments. These events are fishing sport competitions that generate significant revenue for the host communities, both by attracting anglers to compete and by creating a festive atmosphere for attendees. In addition to the tourism-related benefits, tournaments can provide voluntary data collection, increased fishing license revenues, promotion of the quality fishing available and the possibility to increase sales for sponsors. These events often attract wealthy tourists, with prize money at these events reaching in excess of US$4 million. In order to promote the conservation of game fish as well as responsible and ethical angling practices, tournament organizers have developed angling rules oriented toward no-kill fishing and minimizing post release mortality of caught fish. Tagging of fish, and other citizen science initiatives are also commonly promoted through angling clubs.

The role of RF in data collection

As shown by tag and release competitions, the collaboration between anglers and scientists could be very useful for data collection. These collaborations have given rise to important projects such as "The Marine Recreational Information Program", created by the NOAA. In this project, data from anglers inform the deduction of how many fish can be harvested both recreationally and commercially, without negatively affecting the sustainability of individual fisheries. The International Game Fishing Associations "Great Marling Race" has also been hugely successful in developing satellite tags through recreational anglers on a global scale, which has helped to inform management decision for important target species of RF.

Another future step in collaboration between anglers, scientist and fishery managers could be found in mobile smartphone applications (apps) developed for the fishing community. These apps

help to gather numerous types of data, including weather conditions, sea temperatures, direction of currents, fishing rules, location of fish tournaments and other aspects.

Conclusion

RF development may provide environmental benefits, such as the protection of habitat and fish stocks, as well as alternative livelihoods for fishing communities. Collaboration between angler organizations, managers, commercial fishers and scientists is of great importance and RF stakeholders should be proactively engaged in fishery management in order to help develop interdisciplinary management approaches. Scientists have benefited from working with anglers to help with data collection, as indicated in tag and release competitions. The spread of new methods for data collection such as apps is a new and exciting step towards RF participation in research, which could support more traditional data collection methods like license counts and surveys.

The integration of fish-tourism into fishing communities can bring economic and social well-being to communities, however, multiple factors must be considered before assuming that RF and its related tourism activities are a viable and sustainable livelihood for each specific community. Any type of integration of tourism with fishing communities should innately respect the fishing community's culture and identity, while gleaning genuine support for initiatives by the stakeholders. It is also necessary to assess skills required to create a feasible tourism product, and provide training as required.

Lastly, it is important to stress that the introduction of tourism and its associated environmental management schemes often reduce the access of fishing grounds to commercial fishers, creating a conflict of interest among stakeholders. For this reason and in line with the "FAO technical guidelines for responsible fisheries, no.13 Recreational Fisheries", allocation of fish to RF should only be promoted provided that local communities and commercial fishers are not losing out economically and access to resources by the poorest is not constrained.


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HERE'S LOOKING TO 20 YEARS OF GLOBEFISH AND FIN PRESENCE AT THE BRUSSELS SEAFOOD EXPO

In 1997, GLOBEFISH participated for the first time in the Brussels Seafood Expo Global (formerly known as the European Seafood Exposition), jointly with the FISHINFONetwork (FIN) (Eurofish, INFOPESCA, INFOFISH, INFOSAMAK, INFOPECHE, INFOYU).

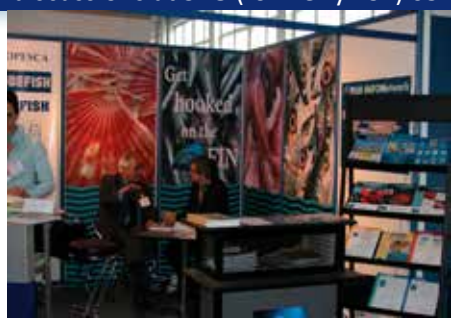
Since then, this key event has become a vital annual appointment for GLOBEFISH and FIN to network with seafood industry stakeholders, gather information about current issues and trends in fish trade, and broaden its ever growing group of correspondents from the industry.

2004

2004 – EUROFISH, INFOSAMAK and INFOFISH at the Swiss Import Promotion Programme (SIPPO)

2005

2005 – INFOPESCA Team and the GLOBEFISH coordinator during informal discussions at SEG (formerly ESE) 05



2006

2006 – GLOBEFISH team member speaks with expo participants

2007

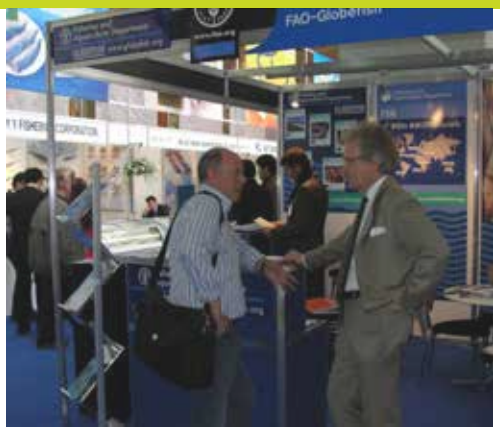
2007 – The EUROFISH team at their booth

2009

2009 – GLOBEFISH and Eurofish team in a moment of relaxation during the 2009 Seafood Expo Global

2011-2012-2014-2015-2016

The GLOBEFISH booth in 2011, 2012, 2014



The GLOBEFISH booth in 2015 and 2016

And..... here's looking to many more!

Photo credits:© GLOBEFISH and FISHINFONetwork

EVENTS

GLOBEFISH HIGHLIGHTS

The Global Aquaculture Summit 2017

FAO and GLOBEFISH will participate in the annual Global Aquaculture Summit organized by the China Aquatic Products Processing and Marketing Alliance (CAPPMA) and the U.S. Soybean Export Council (USSEC) to discuss the challenges and opportunities for sustainable aquaculture production and consumption.

© FAO/ Valerio Crespi

Aquaculture is probably the fastest growing food-producing sector. It now accounts for over 50 percent of the world's fish that is used for food.

Fish is a vital source of animal proteins and healthy long-chain omega-3 fats, while also supplying other nutrients such as iodine, vitamin D and calcium. With the world population expected to reach nine billion by 2050, the aquaculture sector will play a key role in ensuring food and nutrition security as the increased demand will challenge fish production over coming decades.

Analyzing trends, challenges, opportunities as well as technological advances in the aquaculture sector will be the focus of the 2017 Global Aquaculture Summit. Experts from international organizations, industry, research institutions and associations will convene to discuss the current state of the global market performance, development of effective sustainable approaches, new technological innovation releases and the crucial role fish plays in nutrition.

The Summit Opening Ceremony will be addressed by the CAPPMA president on 30 June 2017 and will open the ground to the plenary session entitled **"Present and Perspective of Global Aquaculture Industry"**.

Plenary session agenda

PRESENT AND PERSPECTIVE OF GLOBAL AQUACULTURE INDUSTRY

1. **Challenges and Opportunities of China Aquaculture Industry**
Mai Kangsen, Academician, China Academy of Engineering

2.**China Aquaculture Industry Trend**
Li Shumin, Deputy Director of Bureau of Fisheries, MOA of China

3.**New Development of China Aquaculture Technology Extension**
Xiao Fang, Head of National Fisheries Technology Extension Station

4.**Aquaculture Progress Led by Science and Technology Breakthroughs**
Cui Lifeng, President of Chinese Academy of Fishery Sciences

5.**Global Aquaculture Production and the Latest Trends in Asia and Pacific**
Xiaowei Zhou, FAO

During the high level panel, Mr. Xiaowei Zhou, FAO Fishery Statistician, will present the global aquaculture production trends in Asia and in the Pacific Region.

Concurrent to the plenary session, the three-day Summit will also offer several breakout session, on different topics.

On 30 June, the latest seafood consumption trends and retail developments in the Chinese, European and American markets will be presented by several experts in breakout session 1, dedicated to "**Aquatic Products Consumption Trend Study**". The second breakout session will be focused on the "**Practice and Outlook of Industrialized Aquaculture**", in which participants will hear about innovative technologies, automation and recirculation systems in aquaculture.

The following day will be dedicated to new breeding technologies, aquatic environments and disease control during breakout session 3 ("**Aquaculture Technology Innovation Release**") and to modern ecological and integrated aquaculture practices during breakout session 4 ("**Towards Good Ecological Aquaculture**").

The last day, 2 July, will be dedicated to the latest research developments in the aquaculture feed sector during breakout session 5, "**Aquatic Nourishing Meal Marketing**", where experts will present updates on best practices in protein sources for aquaculture feeding.

That same day, representatives from the industry will focus on the fugu industry market during the "China Fugu Summit", where all aspects of the value chain will be discussed, including traceability and staff training on fugu breeding and processing.

Lastly, a workshop titled "Discussion on ASC Flatfish Standard Development" will take place, organized by CAPPMA and ASC, to explore the sustainable development of the flatfish industry in China.

A REVIEW OF THE GLOBAL AQUACULTURE SUMMIT 2016

In 2016, over 400 representatives from 21 provinces of China and 25 countries participated in the summit. Participants were from private industry, domestic associations, research institutions, governments, embassies and international organizations. The summit addressed several aspects of the aquaculture sector, while underscoring the importance of sustainable growth for the aquaculture and fisheries sector in general.

FAO attended the Summit in 2016 with Jiansan Jia, Deputy Director of FAO Fisheries and Aquaculture Department, who gave a keynote speech on evaluation and expectation of global aquaculture. FAO Fisheries officers Xiaowei Zhou, José Aguilar-Manjarez and Junning Cai, presented from a variety of perspectives to illustrate the status of world fisheries and aquaculture, stressing the value of a sustainable approach from a long-term perspective.

The three-day summit offered four breakout sessions: Innovation and Practice of Modern Aquaculture, Industrialized Aquaculture, Sustainable Aquaculture Production and Trade, and International Fishery Cooperation.

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NEWLY RELEASED FAO DATA ON AQUACULTURE IN BRIEF

The world total aquaculture production in 2015 was 106 million tonnes in live weight, with an estimated farm-gate value of US$163 billion. This total is comprised of **farmed aquatic animals** (76.6 million tonnes, US$157.9 billion), **aquatic plants** (29.4 million tonnes; US$4.8 billion) and **non-food products** (41.1 thousand tonnes; US$208.2 million).

The global production level of farmed aquatic animals, often referred to as **farmed food fish**, was up by only 4 percent in 2015 from 2014, the lowest annual growth rate in the new millennium. As shown in the table below, Americas and Oceania experienced negative growth in food fish aquaculture production in 2015.

World aquaculture production of food fish by continent (live weight in thousand tonnes)

	2010	2011	2012	2013	2014	2015	2015 growth
Africa	1 286	1 396	1 484	1 615	1 711	1 772	3.6%
Americas	2 514	2 774	2 990	3 043	3 347	3 273	-2.2%
Asia	52 452	54 783	58 956	62 645	65 506	68 393	4.4%
Europe	2 523	2 646	2 827	2 729	2 929	2 975	1.6%
Oceania	190	197	186	181	189	186	-1.5%
WORLD	**58 964**	**61 797**	**66 443**	**70 214**	**73 681**	**76 600**	**4.0%**

The composition of major species groups within farmed aquatic animals varies greatly across the world. In volume terms, finfish farming is the most important type of aquaculture operation on all continents. In 2015, finfish farming accounted for 67.8 percent of total aquaculture output of aquatic animals.

World aquaculture production by continent and major species group in 2015 (tonnes in live weight)

INLAND AQUACULTURE	AFRICA	AMERICAS	ASIA	EUROPE	OCEANIA	WORLD
1. Finfish	1 749 712	1 017 534	41 849 837	475 253	5 013	**45 097 349**
2. Crustacea	17	63 954	2 792 441	51	162	**2 856 625**
3. Molluscs		0	283 744			**283 744**
4. Other aquatic animals		531	521 106	0		**521 637**
Sub-total	1 749 729	1 082 019	45 447 128	475 304	5 175	**48 759 355**
MARINE AND COASTAL AQUACULTURE	**AFRICA**	**AMERICAS**	**ASIA**	**EUROPE**	**OCEANIA**	**WORLD**
1. Finfish	15 152	1 003 191	3 855 936	1 863 068	72 775	**6 810 121**
2. Crustacea	3 716	722 869	3 761 188	259	6 693	**4 494 725**
3. Molluscs	3 769	465 296	14 946 627	636 520	96 032	**16 148 245**
4. Other aquatic animals	25		381 831	8	5 593	**387 456**
Sub-total	22 662	2 191 356	22 945 582	2 499 855	181 093	**27 840 547**
TOTAL AQUACULTURE	**AFRICA**	**AMERICAS**	**ASIA**	**EUROPE**	**OCEANIA**	**WORLD**
1. Finfish	1 764 864	2 020 726	45 705 773	2 338 320	77 788	**51 907 471**
2. Crustacea	3 733	786 823	6 553 629	310	6 854	**7 351 350**
3. Molluscs	3 769	465 296	15 230 371	636 520	96 032	**16 431 989**
4. Other aquatic animals	25	531	902 936	8	5 593	**909 093**
TOTAL	**1 772 391**	**3 273 375**	**68 392 710**	**2 975 159**	**186 268**	**76 599 902**

Note: Several rows and columns may not add to the total due to rounding.

On average, aquaculture supplied 10.42 kg of food fish for human consumption in 2015, which is a 0.28 kg increase from 10.14 kg in 2014. This all-time high consumption figure of farmed fish is based on the 2015 world population data from the Population Division of the UN Department of Economic and Social Affairs.

EVENTS

GLOBEFISH HIGHLIGHTS

GLOBEFISH to check in again with the Asia-Pacific aquaculture industry during the Asia-Pacific Aquaculture Expo 2017

For the second year after signing its partnership with CAPPMA, GLOBEFISH will attend one of the most important trade shows in China - the annual Asia-Pacific Aquaculture Expo 2017 (APA Expo 2017)

© FAO/GLOBEFISH

The event, organized by CAPPMA, the Fujian Aquatic Products Processing and Marketing Association (FAPPMA) and the China Great Wall International Exhibition Co., Ltd. (GIE) will be held from 30 June to 2 July 2017 in Fuzhou City, Fujian Province, China. The expo is considered the biggest event exclusively dedicated to the aquaculture value chain in China.

The APA Expo 2017 aims to be a meeting place for all professionals working in the aquaculture sector who want to expand their markets, discuss global and regional trends, and discover the latest technology innovations.

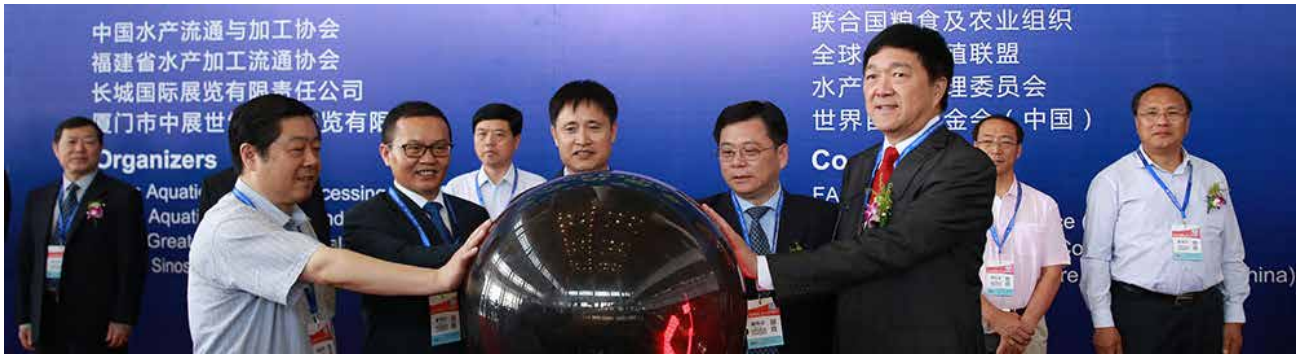
The APA Expo is also meant to be a platform to promote cooperation and collaboration amongst stakeholders in the leading producing and exporting countries of fish and fishery products. This kind of networking is crucial to ensure that common goals are discussed in order to achieve sustainable growth in the aquaculture sector. To underline the need of a sustainable approach, environmental protection and resource conservation, the organizers will offer several activities, fora and meetings to the participants.

These include:

- Global Aquaculture Summit
- Aquatic Feeds New Materials Forum
- New Aquaculture Technology and Species Release
- Online and Social Media Marketing Workshop
- 7th Annual Chinese Abalone Industry Forum and 1st Chinese Abalone Fest
- Healthy Aquaculture and Standards Forum
- International Aquaculture Investment Projects Release and International Cooperation Conference

FAO will participate in the Global Aquaculture Summit, a three-day conference that offers four breakout sessions on several topics. For further details, see our article on the Global Aquaculture Summit 2017, on page 71.

Date: 30 June–2 July 2017
Venue: Fuzhou City, Fujian Province, China
Website: http://en.apaexpo.com.cn/
Email: cappmaexpo@126.com;
apaexpo@chgie.com



GLOBEFISH will be present at the APA EXPO 2017 **Come visit us at our booth!**

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World Congress on Climate Change and Fisheries

This year FAO will co-organize with CONXEMAR the Congress on Climate Change, Fisheries and Trade within the framework of the 19th International Frozen Seafood Products Exhibition to be held in Vigo, Spain, on 2 October 2017.

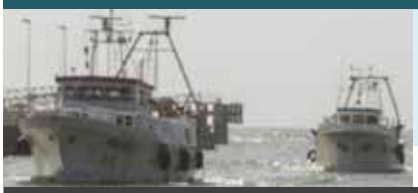
Tentative agenda

09:00-09:40 H	**Opening Session**
09:40-10:50 H	**Session 1: Climate Change and Fisheries: Evidence and Expectations**
09:45-10:00 H	Impacts on Ecosystems and Fisheries. John Pinnegar Director of Climate Change Impacts and Adaptation, CEFAS (Centre for Environment, Fisheries and Aquaculture) United Kingdom.
10:00-10:15 H	Expectations for markets and trade. Stefania Vannuccini, Senior Officer FAO.
10:15-10:30 H	Challenges for Managers and Policymakers. Poul Dengbol, Fisheries Management and Coastal Community Development, Aalborg University (Denmark).
10:30-10:50H	**Panel discussion session 1**
10:50-13:45 H	**Session 2: Regional Perspectives – Private Sector**
	America
10:55-11:10 H	The United States of America: Nicole Kimball, Vice President Pacific Seafood Processors Association.
11:10-11:25 H	Chile.*
11:25-11:40 H	Peru: Darío Alvites, director of Human Consumption Committee, Sociedad Nacional de Industrias.
11:40-12:10 H0 H	**COFFEE BREAK**
	Africa
12:10-12:25 H	South Africa: Madoda Khumalo, Strategic Services Executive de Sea Harvest.
	Asia
12:25-12:40 H	Japan.*
	Europe
12:40-12:55 H	Myron Peck, Professor Biological Oceanography and Fisheries Science. Hamburg University.
12:55: 13:10 H	Norway. Norwegian Seafood Council*
13:10-13:25 H	Iceland.*
13:25-13:45 H	**Panel discussion session 2**
13:45-14:45 H	**LUNCH**
14:45-16:10 H	**Session 3: Climate Change and Fisheries: Responses and Opportunities**
14:50-15:05 H	Resource Management Responses – Fisheries and Oceans Canada (DFO).*
15:05-15:20 H	Responses from NGOs – María Cornax, Policy and Advocacy Director. Oceana
15:20 -15:35 H	Climate Change and Trade – World Trade Organization (WTO).*
15:35 -15:50 H	FAO approaches and adaptation toolboxes – Audun Lem, Deputy Director of FAO Fisheries and Aquaculture Policy and Resources Division, FAO.
15:50-16:10 H	**Panel discussion session 3**
16:10-17:15 H	**Session 4: Financing for climate change**
16:15-16:30 H	Rabobank.*
16:30-16:45 H	World Bank.*
16:45-17:00 H	AFDB (African development Bank). Samba Tounkara, coordinator of ClimDev Special Fund.
17:00-17:15 H	OECD.*
17:15-17:30 H	**SUMMING UP: "Looking into the crystal ball" Arni Mathiesen**
17:30-17:50 H	Closing Session

* Speaker to be confirmed

More details in the July issue of the GLOBEFISH Highlights and on the CONXEMAR website: http://www.conxemar.com

FISH AND FISHERY PRODUCTS STATISTICS [1]



	Capture fisheries production		Aquaculture fisheries production		Exports			Imports		
	2014	2015	2014	2015	2014	2015	2016 estim.	2014	2015	2016 estim.
	Million tonnes (live weight equivalent)				USD billion					
ASIA	**50.5**	**50.7**	**65.5**	**68.4**	**57.9**	**51.8**	**54.5**	**43.5**	**41.7**	**44.3**
China[2]	18.3	18.7	45.8	47.9	23.9	22.2	23.1	13.5	13.4	14.0
of which China. Hong Kong SAR	0.2	0.1	0.0	0.0	1.1	0.8	1.4	3.7	3.6	3.8
& Taiwan Province of China	1.1	1.0	0.3	0.3	1.8	1.6	1.6	1.2	1.2	1.3
India	5.0	4.8	4.9	5.2	5.6	4.9	5.5	0.1	0.1	0.1
Indonesia	6.4	6.5	4.3	4.3	4.2	3.6	4.0	0.3	0.3	0.3
Japan	3.6	3.5	0.6	0.7	1.9	1.9	2.1	14.8	13.5	14.1
Korea, Rep. of	1.7	1.6	0.5	0.5	1.7	1.5	1.6	4.3	4.3	4.6
Philippines	2.2	2.2	0.8	0.8	1.0	0.8	0.7	0.3	0.4	0.4
Thailand	1.7	1.7	0.9	0.9	6.6	5.7	5.8	2.7	2.5	3.1
Viet Nam	2.7	2.8	3.3	3.4	8.0	6.8	7.4	1.3	1.3	1.3
AFRICA	**8.6**	**8.8**	**1.7**	**1.8**	**6.3**	**5.7**	**5.6**	**5.8**	**5.3**	**5.6**
Egypt	0.3	0.3	1.1	1.2	0.0	0.0	0.0	0.8	0.8	0.8
Morocco	1.4	1.4	0.0	0.0	2.0	2.0	2.1	0.2	0.2	0.2
Namibia	0.4	0.5	0.0	0.0	0.7	0.6	0.6	0.0	0.0	0.0
Nigeria	0.8	0.7	0.3	0.3	0.1	0.1	0.1	1.3	1.2	1.2
Senegal	0.5	0.4	0.0	0.0	0.4	0.4	0.3	0.0	0.0	0.0
South Africa	0.6	0.6	0.0	0.0	0.6	0.5	0.6	0.4	0.3	0.4
CENTRAL AMERICA	**2.2**	**2.1**	**0.4**	**0.4**	**2.7**	**2.4**	**2.5**	**1.9**	**1.7**	**1.7**
Mexico	1.5	1.5	0.2	0.2	1.1	1.0	1.1	0.9	0.8	0.8
Panama	0.2	0.1	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1
SOUTH AMERICA	**8.6**	**9.3**	**2.4**	**2.3**	**15.5**	**13.1**	**13.8**	**3.4**	**3.0**	**2.8**
Argentina	0.8	0.8	0.0	0.0	1.6	1.5	1.7	0.2	0.2	0.2
Brazil	0.8	0.7	0.6	0.6	0.2	0.2	0.2	1.6	1.2	1.2
Chile	2.2	1.8	1.2	1.0	5.9	4.8	5.1	0.4	0.4	0.3
Ecuador	0.7	0.6	0.4	0.4	4.3	3.7	3.9	0.1	0.1	0.1
Peru	3.6	4.8	0.1	0.1	2.9	2.4	2.2	0.2	0.2	0.2
NORTH AMERICA	**6.1**	**6.2**	**0.6**	**0.6**	**11.2**	**11.0**	**11.7**	**24.3**	**22.5**	**23.4**
Canada	0.9	0.9	0.1	0.2	4.5	4.7	5.1	3.0	2.7	2.8
United States of America	5.0	5.0	0.4	0.4	6.1	5.9	6.2	21.3	19.8	20.5
EUROPE	**13.7**	**14.1**	**2.9**	**3.0**	**51.5**	**46.0**	**50.5**	**60.1**	**51.9**	**56.5**
European Union (Member Organization) [2]	5.4	5.3	1.3	1.3	33.2	29.7	32.6	53.3	47.1	51.6
of which Extra-EU	"	"	"	"	6.1	5.4	5.7	28.2	25.0	27.2
Iceland	1.1	1.3	0.0	0.0	2.1	2.1	2.0	0.1	0.2	0.1
Norway	2.3	2.3	1.3	1.4	10.8	9.2	10.8	1.4	1.2	1.2
Russian Federation	4.3	4.5	0.2	0.2	3.8	3.7	3.8	3.0	1.6	1.6
OCEANIA	**1.3**	**1.4**	**0.2**	**0.2**	**3.2**	**2.9**	**2.9**	**2.2**	**1.8**	**1.9**
Australia	0.2	0.2	0.1	0.1	1.1	1.1	1.0	1.7	1.4	1.5
New Zealand	0.4	0.4	0.1	0.1	1.2	1.1	1.2	0.2	0.2	0.2
WORLD [3]	**91.1**	**92.6**	**73.7**	**76.6**	**148.3**	**132.9**	**141.6**	**141.3**	**127.9**	**136.1**
World excluding Intra-EU	"	"	"	"	**121.1**	**108.5**	**114.6**	**116.2**	**105.8**	**111.7**
Developing countries	66.6	67.8	69.3	72.0	81.1	71.6	74.7	39.0	37.5	39.6
Developed countries	24.5	24.7	4.4	4.6	67.2	61.3	66.9	102.2	90.4	96.6
LIFDCs	12.3	12.2	7.6	8.1	9.1	8.0	8.3	3.4	3.2	3.4
LDCs	8.6	8.7	3.4	3.5	3.0	2.6	2.2	1.2	1.1	1.2
NFIDCs	16.4	17.8	5.0	5.1	10.9	9.6	8.8	4.5	4.4	4.5

[1] Production and trade data exclude whales, seals, other aquatic mammals and aquatic plants. Trade data include fish meal and fish oil.

[2] EU 28. Including intra-trade. Cyprus is included in Asia as well as in the European Union (Member Organization).

[3] For capture fisheries production, the aggregate includes also 3 782 tonnes in 2014 and 38 732 tonnes in 2015 of not identified countries, data not included in any other aggregates. Totals may not match due to rounding.

photo ©FAO/Giulio Napolitano

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ISBN 978-92-5-109778-6 ISSN 1014-9201

I7332EN/1/05.17